

Sgt Ox To B.Y. B Squadron

**CORPORAL
TO
FIELD OFFICER**

4th Edition Amended Up to Date

BY

LIEUT.-COLONEL R. J. S. LANGFORD

WITH FOREWORD BY THE LATE

MAJ.-GEN. SIR J. H. MACBRIEN, K.C.B., C.M.G., D.S.O.

THE COPP CLARK COMPANY, LIMITED
TORONTO

A Ready Reference for all Ranks in Peace and War.

CORPORAL TO FIELD OFFICER

By

LIEUT.-COLONEL R. J. S. LANGFORD

Late Commanding Officer
THE ROYAL CANADIAN REGIMENT
and Late Commandant
R.S.I. and M.G., Eastern Canada

with foreword by the late

MAJ.-GEN. SIR J. H. MACBRIEN, K.C.B., C.M.G., D.S.O.

4th Edition Amended Up to Date

**THE COPP CLARK COMPANY, LIMITED
TORONTO**

All Rights Reserved

[859]

PRINTED IN CANADA
THE COPP CLARK PRESS

FOREWORD

The author of this book has contributed a valuable aid to officers and non-commissioned officers of the Infantry of the Non-Permanent Active Militia.

It contains concise information on all subjects pertaining to qualification for rank in the Infantry and, while many parts of it should prove valuable to other arms and branches, I particularly commend it to young infantry officers and non-commissioned officers who are studying for promotion.

J. H. MACBRIEN,
Major-General
Chief of Staff

Ottawa, Ont.

INTRODUCTION

The objective of the authors of the first edition of "Corporal to Field Officer" was a handy reference book which would contain the essentials of all the military manuals.

This fourth edition has the same objective and its author hopes that all ranks of the Canadian military forces will find it helpful in the attainment of military knowledge.

This book is not intended to replace in any way the Military Manuals, but is solely intended as a handy reference and help. Students are advised to read carefully the text-books referred to.

The author is greatly indebted to Colonel Alan M. Thomas, M.B.E., V.D., and many brother officers and friends for their assistance.

Toronto, October, 1940.

R.J.S.L.

TABLE OF CONTENTS

	PAGE
FOREWORD	iii
INTRODUCTION	iv
ABBREVIATIONS	ix
CHAPTER I: ORGANIZATION AND ADMINISTRATION	
1. The Militia of Canada	1
2. The Division	3
3. The Infantry Battalion	5
4. Organization of Divisional Troops	9
5. Supplies and Petrol	16
6. Principles of Ammunition Supply	27
7. Evacuation of Casualties	29
CHAPTER II: DUTIES	
8. Duties	36
9. Duties of Regimental Officers, W.Os. and N.C.Os.	41
10. Official Books, Etc., and Correspondence	55
11. Badges of Rank	60
12. Pay and Allowances	64
13. Passes	66
14. Soldier Servants	66
15. Soldiers Generally	67
16. The Band	68
17. Serjeants' Mess	69
18. Officers' Mess	70
18a. Range Discipline	72
CHAPTER III: MILITARY LAW	
19. Military and Martial Law	74
20. Discipline	75
21. Arrest and Military Custody	76
22. Investigation of Charges	77
23. Powers of Company Commander	78
24. Powers of the Commanding Officer	78
25. Penalties	79
26. Courts of Inquiry and Boards of Officers	80
27. Aid to the Civil Power	81

CHAPTER IV: MAP READING	PAGE
28. Proficiency	84
29. Definitions	84
30. Technical Terms	85
31. Conventional Signs	86
32. Scales	86
33. Problems and Their Solution	89
34. Contours	90
35. Setting a Map	91
36. Gradients and Degree of Slope	92
37. Visibility	93
38. Bearings, Compass and Protractor	95
39. Map References and Co-ordinates	97
40. The Modified British Grid	98
41. Map Enlargements	99
42. Photo Reading	99
CHAPTER V: FIELD ENGINEERING	
43. Definitions	102
44. Simple Defence Works	103
45. Obstacles	105
46. Road Blocks	106
CHAPTER VI: MARCHES	
47. General	109
48. Sea and Rail	109
49. Mechanical Transport	110
50. Classification of Marches	111
51. Type of Marches	113
52. Observation and Attack from Air	115
53. Night Marches	115
54. March Discipline	115
CHAPTER VII: QUARTERS	
55. General	119
56. Billets and Close Billets	119
57. Camps	119
58. Bivouacs and Dugouts	119
59. Camp Sites	120
60. Distribution of Quarters	120
61. Billeting Party	121
62. Sanitation	121
63. Water	121
64. Duties of the Platoon Commander	122

CHAPTER VIII: INFANTRY IN BATTLE	PAGE
65. Historical	125
66. Rifle and Bayonet	125
67. Light Machine Gun	126
68. 2-inch Mortar	127
69. Anti-Tank Rifle	127
70. 3-inch Mortar	127
71. H. E. Grenade	128
72. The Carrier Platoon	128
73. Machine Guns	129
74. Fire	129
75. Ground and Formations	132
76. Scouts and Patrols	133
CHAPTER IX: CHARACTERISTICS	
77. Introductory	137
78. Co-operation	138
79. Cavalry	138
80. Artillery	139
81. Engineers	139
82. Infantry	140
83. Armoured Fighting Vehicles (A.F.Vs.)	140
84. Aircraft	141
85. Interdependence of the Various Arms	142
CHAPTER X: PROTECTION	
86. General	146
87. Advanced Guards	147
88. Flank Guards	150
89. Rear Guards	151
90. Protection at Rest	153
91. Anti-Aircraft Defence	155
92. Protection Against Gas	156
93. Protection Against A.F.Vs.	157
CHAPTER XI: ATTACK	
94. Principles	160
95. Object	160
96. Distribution	161
97. Rifle Company in the Attack	162
98. Rifle Platoon in the Attack	163
99. Rifle Section in the Attack	163

CHAPTER XII: DEFENCE	PAGE
100. Principles	167
101. Object	167
102. Organization of Position	168
103. Rifle Company in the Defence	168
104. Rifle Platoon in the Defence	169
105. Section Commander	169
CHAPTER XIII: MESSAGES, REPORTS AND ORDERS	
106. Sample Message	172
107. Instructions for Compiling Messages	172
108. Verbal Messages	173
CHAPTER XIV: APPRECIATIONS	
109. Definition	175
110. Sequence	175
111. Headings, etc., for Sample Appreciation	176
CHAPTER XV: THE NEW DRILL	
112. Squad Drill	177
113. Arms Drill	178
114. Platoon Drill	179
115. Company Drill	179
116. Battalion Drill	181
117. Field Drill	184
Legend—(Key to plates)	185
Plate No. 1.—Platoon in line in three ranks	186
Plate No. 2.—Platoon in column of route (threes)	187
Plate No. 3.—Company in line by platoons (training)	188
Plate No. 4.—Company in line (ceremonial)	188
Plate No. 5.—Company in column of route	189
Plate No. 6.—Company in close column (ceremonial)	189
Plate No. 7.—Battalion in column of route	190
Plate No. 8.—Battalion in line	191
Plate No. 9.—Battalion in close column	192

ABBREVIATIONS

Acknowledge	Ack.
Addressed	Addsd.
Administration or Administrative	Adm.
Advanced Dressing Station	A.D.S.
Advanced Guard	Adv. Gd.
Ammunition	Amn.
Ammunition Railhead	A.R.H.
Ammunition Refilling Point	A.R.P.
Anti-Aircraft or Army Act	A.A.
Anti-Tank	A.-Tk.
Appendix	Appx.
Armoured Fighting Vehicle	A.F.V.
Army Order	A.O.
Artillery	Arty.
Battalion	Bn.
Battery	Bty.
Brigade	Bde.
Brigadier	Brig.
Captain	Capt.
Casualty Clearing Station	C.C.S.
Cavalry	Cav.
Colonel	Col.
Column	Coln.
Commandant	Comdt.
Commander	Comdr.
Commanding Officer	C.O.
Company	Coy.
Company Quartermaster-Serjeant	C.Q.M.S.
Company Serjeant-Major	C.S.M.
Corporal	Cpl.
Corps Troops or Communication Trench	C.T.
Counter-Battery or Confinement to Barracks	C.B.
Delivery Point	D.P.
Deputy Assistant Director of Ordnance Services	D.A.D.O.S.
Despatch Rider	D.R.
Detachment	Det.
Detention	Detn.
District	Dist.
District Court-Martial	D.C.M.

Divisional or Division	Div.
Driver or Drummer	Dr.
Echelon	Ech.
Establishment	Est.
Field Ambulance	Fd. Amb.
Field Battery	Fd. Bty.
Field General Court-Martial	F.G.C.M.
Field Officer	F.O.
Field Service Regulations	F.S.R.
General service or General Staff	G.S.
Headquarters	H.Q.
High Explosive or Horizontal Equivalent	H.E.
Hours	Hrs.
In charge of	i/c
Infantry	Inf.
Intelligence Officer	I.O.
Internal Combustion	I.C.
Junction	Junc.
Lance-Bombardier	L/Bdr.
Lance-Corporal	L/Cpl.
Lance-Serjeant	L/Sjt.
Lieutenant	Lieut.
Lieutenant-Colonel	Lt.-Col.
Light Automatic	L.A.
Light Machine Gun	L.M.G.
Limbered General Service Waggon	L.G.S. Waggon.
Line or Lines of Communication	L. of C.
Machine Gun	M.G.
Main Dressing Station	M.D.S.
Major	Maj.
Manual of Map Reading	M.M.R.
Mechanical Transport	M.T.
Mechanized	Mech.
Medical Officer	M.O.
Meeting Point or Military Police	M.P.
Miles per Hour	m.p.h.
Military Landing Officer	M.L.O.
Motor Ambulance Convoy	M.A.C.
Motor Cycle	M.Cy.
Mounted	Mtd.
Non-Commissioned Officer	N.C.O.
Observation Post	O.P.
Officer	Offr.
Officer Commanding	O.C.

Officer-in-Charge	O. i/c.
Other Ranks	O.R.
Petrol Refilling Point	P.R.P.
Pioneer	Pnr.
Platoon	Pl.
President Regimental Institutes	P.R.I.
Private	Pte.
Quartermaster	Qr.-Mr.
Quartermaster-Serjeant	Q.M.S.
Radio-Telephony	R/T.
Railway	Ry.
Railway Transport Officer	R.T.O.
Reconnaissance	Recce.
Regiment	Regt.
Regimental Aid Post	R.A.P.
Regimental Serjeant-Major	R.S.M.
Regimental Quartermaster-Serjeant	R.Q.M.S.
Refilling Point or Rules of Procedure	R.P.
Rendezvous	R.V.
Section	Sec.
Serjeant	Sjt.
Signal	Sig.
Small Arm Ammunition	S.A.A.
Squadron	Sqn.
Staff Captain	S.C.
Staff Officer	S.O.
Starting Point	S.P.
Supply Officer	Sup. O.
Supply Railhead	S.R.H.
Supply Refilling Point	S.R.P.
Transport	Tpt.
Transport Officer	T.O.
Troop	Tp.
Vertical Interval	V.I.
Walking Wounded Collecting Post	W.W.C.P.
War Establishment	W.E.
Warrant Officer or War Office	W.O.
Wireless Telegraphy	W/T.

Note: — For full list of abbreviations, vide Appendix I in Field Service Pocket Book, 1932.

MILITIA SERVICE

Chief of the General Staff.....	C.G.S.
Director of Military Training and Staff Duties.....	D.M.T.
Director of Military Operations and Intelligence.....	D.M.O. & I.
Adjutant-General.....	A.G.
Director of Organization and Personal Services.....	D.O. & P.S.
Director-General of Medical Service.....	D.G.M.S.
Judge-Advocate-General.....	J.A.G.
Quartermaster-General.....	Q.M.G.
Director of Engineer Services.....	D.E.S.
Director of Supplies and Transport.....	D. of S. & T.
Master-General of the Ordnance.....	M.G.O.
Director of Mechanization and Artillery.....	D. of M. & A.
Director of Equipment and Ordnance Services.....	D.E.O.S.
<hr/>	
District Officer Commanding.....	D.O.C.
General Staff Officer.....	G.S.O.
District Intelligence Officer.....	D.I.O.
District Signal Officer.....	D.S.O.
Assistant Adjutant and Quartermaster-General.....	A.A. & Q.M.G.
Deputy Assistant Adjutant and Quartermaster-General.....	D.A.A. & Q.M.G.
District Engineer Officer.....	D.E.O.
District Supply and Transport Officer.....	D.S. & T.O.
District Medical Officer.....	D.M.O.
District Ordnance Officer.....	D.O.O.
District Paymaster.....	D.P.M.
District Veterinary Officer.....	D.V.O.

ABBREVIATED TITLES FOR USE IN THE FIELD AND DURING TRAINING

PERMANENT FORCE

The Royal Canadian Dragoons.....	R.C.D.
Lord Strathcona's Horse (Royal Canadians).....	L.S.H.
Royal Canadian Horse Artillery.....	R.C.H.A.
"A" ("B" etc.) Battery.....	"A" Bty. R.C.H.A.
Royal Canadian Artillery.....	R.C.A.
1st (2nd etc.) Medium Battery.....	1 Med. Bty. R.C.A.
1st (2nd etc.) Heavy Battery.....	1 Hy. Bty. R.C.A.
1st (2nd etc.) Anti-Aircraft Battery.....	1 A.A. Bty. R.C.A.
Royal Canadian Engineers.....	R.C.E.
Royal Canadian Corps of Signals.....	R. C. Sigs.
The Royal Canadian Regiment.....	R.C.R.
Princess Patricia's Canadian Light Infantry.....	P.P.C.L.I.
Royal 22e Regiment.....	R. 22e R.
The Royal Canadian Army Service Corps.....	R.C.A.S.C.
The Royal Canadian Army Medical Corps.....	R.C.A.M.C.
The Royal Canadian Ordnance Corps.....	R.C.O.C.
The Royal Canadian Army Veterinary Corps.....	R.C.A.V.C.

NON-PERMANENT ACTIVE MILITIA

Cavalry

The Governor General's Horse Guards.....	G.G.H.G.
4th Princess Louise Dragoon Guards.....	P.L.D.G.
8th Princess Louise's New Brunswick Hussars.....	8 N.B. H.
2nd/10th Dragoons.....	2/10 D.
1st Hussars.....	1 H.
6th Duke of Connaught's Royal Canadian Hussars (Armoured Car).....	6 H. (Armd. C.)
7th/11th Hussars.....	7/11 H.
12th Manitoba Dragoons.....	12 D.
King's Canadian Hussars (Armoured Car).....	K.C.H. (Armd. C.)
15th Alberta Light Horse.....	15 Horse.
16th/22nd Saskatchewan Horse.....	16/22 Horse.
17th Duke of York's Royal Canadian Hussars.....	17 H.

Cavalry—Concluded

The Manitoba Mounted Rifles.....	M.M.R.
19th Alberta Dragoons.....	19 D.
14th Canadian Light Horse.....	14 Horse.
The British Columbia Dragoons.....	B.C.D.
The British Columbia Hussars (Armoured Car).....	B.C.H. (Armd. C.)
The Ford Garry Horse.....	Fort Garry's.
The Prince Edward Island Light Horse.....	P.E.I.L.H.
2nd Armoured Car Regiment.....	2 Armd. C. R.

Infantry

The Governor General's Foot Guards....	G.G.F.G.
The Canadian Grenadier Guards.....	C.G.G.
The Queen's Own Rifles of Canada.....	Q.O.R. of C.
The Halifax Rifles.....	Hal. Rif.
Victoria Rifles of Canada.....	V.R.C.
The Black Watch (Royal Highland Regiment) of Canada.....	R.H.C.
The Royal Rifles of Canada.....	R.R.C.
Les Voltigeurs de Québec.....	Vol. de Q.
The Royal Regiment of Canada.....	R.R. of C.
The Royal Hamilton Light Infantry (Wentworth Regiment).....	R.H.L.I.
The Princess of Wales' Own Regiment (M.G.).....	P.W.O.R. (M.G.)
The Argyll Light Infantry (Tank).....	Argyll L.I. (T.)
The Hastings and Prince Edward Regiment.....	Hast. & P.E.R.
The Lincoln and Welland Regiment....	Linc. & Welld. R.
The Oxford Rifles.....	Oxf. Rif.
The Canadian Fusiliers (City of London Regiment) (M.G.).....	Can. Fus. (M.G.)
The Queen's York Rangers (1st American Regiment) (M.G.).....	Q. Y. Rang. (M.G.)
The Elgin Regiment.....	Elgin R.
The Middlesex and Huron Regiment....	Mx. & Huron R.
The Perth Regiment (M.G.).....	Perth R. (M.G.)
The Highland Light Infantry of Canada.....	H. L. I. of C.
The Grey and Simcoe Foresters.....	Grey & Sim. Fors.
The Ontario Regiment (Tank).....	Ont. R. (T.)
The Lorne Scots (Peel, Dufferin and Halton Regiment).....	Lorne Scots.

Infantry—Continued

The Dufferin and Haldimand Rifles of Canada.....	D. & Hald. Rif.
The Midland Regiment (Northumberland and Durham).....	Mid. R.
The Brockville Rifles.....	Brock. Rif.
The Lanark and Renfrew Scottish Regiment.....	Lan. & Ren. Scot. R.
The Sherbrooke Regiment (M.G.).....	Sher. R. (M.G.)
The Prince of Wales Rangers (Peter- borough Regiment) (M.G.).....	P. of W. Rang. (M.G.)
The Stormont, Dundas and Glengarry Highlanders.....	S.D. & G. Highrs.
Le Régiment de Montmagny.....	R. de Monty.
Le Régiment de Québec (Mitrailleuses).....	R. de Q. (Mit.)
Le Régiment de la Chaudière (Mitrail- leuses).....	R. de Chaud. (Mit.)
Le Régiment de Châteauguay (Mitrail- leuses).....	R. de Chat. (Mit.)
Les Fusiliers Mont-Royal.....	Fus. M. R.
The Princess Louise Fusiliers (M.G.)....	P. L. Fus. (M.G.)
The Carleton and York Regiment.....	Carl. & York R.
The West Nova Scotia Regiment.....	West N. S. R.
The North Shore (New Brunswick) Regiment.....	N. Shore R.
The New Brunswick Rangers.....	N.B. Rang.
Le Régiment de Joliette.....	R. de Jol.
Le Régiment de St. Hyacinthe.....	R. de St. H.
The Three Rivers Regiment (Tank)....	Three Riv. R. (T.)
The Pictou Highlanders.....	Pictou Highrs.
The North Nova Scotia Highlanders (M.G.).....	Nth. N. S. Highrs. (M.G.)
The Cape Breton Highlanders.....	C. B. Highrs.
The Saint John Fusiliers (M.G.).....	St. John Fus. (M.G.)
The Prince Edward Island Highlanders.....	P.E.I. Highrs.
Le Régiment de Maisonneuve.....	R. de Mais.
The Cameron Highlanders of Ottawa (M.G.).....	C.H. of O. (M.G.)
Fusiliers du St. Laurent.....	Fus. du St. L.
The Royal Winnipeg Rifles.....	R. Wpg. Rif.
The Essex Scottish.....	Essex Scot.
48th Highlanders of Canada.....	48 Highrs.

Infantry—Concluded

The British Columbia Regiment (Duke of Connaught's Own Rifles).....	B.C.R.
Les Franc-Tireurs du Saguenay.....	Les f-t du Sag.
The Algonquin Regiment.....	Alq. R.
The Kent Regiment (M.G.).....	Kent R. (M.G.)
Le Régiment de Lévis.....	R. de Lévis.
The Sault Ste. Marie and Sudbury Regiment (M.G.).....	S. Ste. M. & Sud. (M.G.)
The Argyll and Sutherland Highlanders of Canada (Princess Louise's) (M.G.).....	A. & S. H. of C. (M.G.)
The Lake Superior Regiment.....	Lake Sup. R.
The Regina Rifle Regiment.....	Regina Rif.
The Winnipeg Grenadiers (M.G.).....	Wpg. Gren. (M.G.)
The Edmonton Fusiliers (M.G.).....	Edmn. Fus. (M.G.)
The Rocky Mountain Rangers.....	R. M. Rang.
The Queen's Own Cameron Highlanders of Canada.....	Camerons of C.
Les Fusiliers de Sherbrooke.....	Fus. de Sher.
The Calgary Highlanders.....	Calg. Highrs.
The Calgary Regiment (Tank).....	Calg. R. (T.)
The Westminster Regiment (M.G.).....	Westmr. R. (M.G.)
The Seaforth Highlanders of Canada.....	Seaforth of C.
The Winnipeg Light Infantry (M.G.).....	W. L. I. (M.G.)
The Saskatoon Light Infantry (M.G.).....	Sask. L. I. (M.G.)
The Canadian Scottish Regiment—	
1st Battalion.....	1 C. Scot. R.
2nd Battalion (M.G.).....	2 C. Scot. R., (M.G.)
The Prince Albert and Battleford Volunteers.....	P.A. & B. Vol.
The King's Own Rifles of Canada (M.G.).....	K.O.R. of C. (M.G.)
Irish Fusiliers (Vancouver Regiment).....	Ir. Fus.
The Royal Montreal Regiment (M.G.).....	R.M.R. (M.G.)
Le Régiment de Hull.....	R. de Hull.
The Scots Fusiliers of Canada.....	S.F. of C.
The South Alberta Regiment.....	S. Alta. R.
The Edmonton Regiment.....	Edmn. R.
The Toronto Scottish Regiment (M.G.).....	Tor. Scot. R. (M.G.)
The Irish Regiment of Canada (M.G.).....	Ir. R. C. (M.G.)
The South Saskatchewan Regiment.....	S. Sask. R.
The New Brunswick Regiment (Tank).....	N.B.R. (T.)
The Essex Regiment (Tank).....	Essex R. (T.)

CORPORAL TO FIELD OFFICER**CHAPTER I****ORGANIZATION AND ADMINISTRATION****1. The Militia of Canada**

1. *Command-in-Chief* of the Militia is vested in the King and is exercised or administered by His Majesty or the Governor-General as his representative.

2. i. *The Militia of Canada* comprises the Active and Reserve Militia and is composed of officers and soldiers of various arms who have undertaken a definite liability for service, or who have been required to serve thereon under the provisions of the Militia Act.

ii. *The Active Militia* comprises:—

(a) The Permanent Active Militia.

(b) The Non-Permanent Active Militia.

iii. *The Reserve Militia*.—(K.R. Can. Appx. 10.)

iv. *Supplementary to*, but not an integral part of the Militia as educational and training establishments are:—

(a) The Royal Military College.

(b) Officially authorized cadet corps.

(c) Officially authorized rifle associations and clubs.

3. *The Reserves of the Active Militia*, as distinguished from the Reserve Militia mentioned in paragraph 2, comprise all reserve categories of the Active Militia, viz.:

i. Reserve of Officers. (General Lists).

ii. Corps Reserves of Officers.

iii. Reserve General Lists.

iv. Special Reserve List. R.C.O.C. (N.P.)

v. Reserve Regimental Depots. (Cavalry and Infantry.)

vi. Reserve General Hospital.

vii. Reserve Motor Ambulance Convoys. R.C.A.M.C. (N.P.)

4. *The Terms of Service* for the Militia are laid down in the Militia Act, Section 15.

5. *Peace Establishments* of the Active Militia are published in General Orders.

6. *Training Establishments* are such as may be authorized from year to year.

7. *Distribution* of the Militia is shown in the Defence Forces List.

8. *The Defence Council*.—Pursuant to the powers conferred by the Dept. of National Defence Act, R.S.C. 1927, Chap. 136, His Excellency the Governor-in-Council created a Defence Council composed of:

President The Minister of National Defence
 Vice-President. The Deputy Minister of National Defence
 Members The Chief of General Staff, Department
 of National Defence
 The Chief of Naval Staff
 The Chief of Air Staff
 Associate Members,
 The Adjutant-General
 The Quartermaster-General
 The Master-General of the Ordnance
 The Judge-Advocate-General

9. *Staff at N.D.H.Q.* comprises the following branches:—

The General Staff.
 The Adjutant-General.
 The Quartermaster-General.
 The Master-General of the Ordnance.

The duties of each of the above mentioned branches are laid down in K.R. Can. Appx. VI.

10. *Higher Commanders* of the Militia are the respective District Officers Commanding, each of whom is appointed to command a District.

11. *Military Districts*.—For the purpose of decentralization and command, Canada is divided into Districts. At present there are eleven. The location of each District and the troops it contains are shown in the Militia List.

12. *District Staff* at the H.Q. of each District is composed as under:—

G.S.O.
 A.A. and Q.M.G.
 D.A.A. and Q.M.G.
 Heads of Services.

13. *Command in the Field*.—The command is vested in the Commander-in-Chief who is appointed by the Government. He is responsible for the maintenance of his forces, for operations and for the military government of all territory under martial law. He is not directly responsible for technical and financial methods employed in providing for the requirements of his forces. That is the responsibility of the Heads of Services, subject to the general policy laid down by the C.-in-C. The same principles apply to subordinate commanders.

14. *Administration*.—Administration is the term applied to the machinery by which the daily requirements of the forces in the field are met. Heads of Services are responsible for provision of animals, supplies, stores, transportation, etc.

The theatre of war is divided into administrative areas. The area occupied by a field formation is controlled by the commander of the formation. On the lines of communication an area is normally commanded by a G.O.C., specially appointed.

2. The Division

In the field, Armies and Corps have no fixed composition, but are cadre formations. The Division is the basis of the Field Army. It is a self-contained formation complete in itself and is comprised of fighting troops and services in due proportion. Its organization is common to all nations. Duke Ferdinand of Brunswick created the Division in the Seven Years' War, 1756. In the British Army the Division is first found in the Peninsular War, and in 1811 the whole of Wellington's Army was so organized.

PRESENT ORGANIZATION

Divisional Headquarters.
 3 Infantry Brigades.
 Divisional Troops.

DIVISIONAL HEADQUARTERS

Divisional Headquarters is composed of General Staff Officers, Administrative Staff Officers, the Heads of Services, the Senior Chaplain of the Division, 2 A.D.Cs. to the Divisional Commander, and a subordinate staff of clerks, orderlies, etc. Included in Divisional Headquarters is a Div. Sec. Intelligence Corps. Attached to Div. Headquarters is a D.A.P.M.

INFANTRY BRIGADES

Each of the 3 Infantry Brigades consists of a Headquarters, 3 Infantry Battalions and a Bde. A.-Tk. Coy.

Brigade Headquarters is commanded by a Brigadier; to assist him he has one General Staff Officer, known as a Brigade Major, and one Administrative Officer, known as a Staff Captain. Also on the Brigade Staff are an Intelligence Officer, a Transport Officer, a Chaplain, and one officer each from the R.C.A.S.C. and the R.C.O.C. There is a small subordinate staff of clerks, batmen, etc.

Infantry Battalion.—Each Infantry Battalion consists of a Battalion Headquarters, a Headquarters Company and 4 Rifle Companies.

A Bde. A.-Tk. Coy.—Consists of a Company Headquarters and three platoons. Each platoon has a headquarters and three detachments. There is one Anti-tank gun to each detachment, making a total of nine in the company.

An Infantry Anti-Tank Company attached to an Infantry Brigade Headquarters is composed of the Anti-tank Platoons of the Infantry Battalions comprising the Brigade, with the addition of a Company Headquarters, which will normally be provided from these Battalions. If a Battalion is detached from a Brigade whether permanently, or for special duty, or to proceed overseas independently, the Anti-tank platoon of that Battalion will proceed with it unless orders to the contrary are issued. (See chart page 9.)

DIVISIONAL TROOPS

Divisional Troops consist of:—

1 Div. Cav. Regt.—The Div. Cav. Regt. is mechanized, the horse being replaced by Light Tanks, Armoured Scout Carriers and Motor-cycles.

The Regt. consists of a Regimental Headquarters, a Headquarters Squadron and 3 Light Tank Squadrons.

Divisional Artillery.—The Divisional Artillery consists of a Headquarters, 3 Field Regiments and 1 Anti-Tank Regiment.

Each Field Regiment consists of a Headquarters and 2 Batteries. The Anti-Tank Regiment consists of a Headquarters and 4 Batteries.

Divisional Engineers.—The Divisional Engineers consists of a Headquarters, 1 Field Park Company and 3 Field Companies.

Divisional Signals.—The Divisional Signals consists of a Headquarters and 3 Signal Companies.

Divisional Royal Army Service Corps.—The Divisional R.A.S.C. consists of a Headquarters, 1 Amn. Coy., 1 Petrol Coy., and 1 Supply Coln.

Divisional Royal Army Medical Corps.—The Divisional R.A.M.C. consists of 3 Field Ambulances and 1 Hygiene Section.

Police and Postal Services within the Division are supplied by 1 Provost Coy., and 1 Postal Unit respectively.

REASONS FOR ORGANIZATION

Before going into the organization of fighting units, it might be well at this point to ask ourselves the reasons for organization. The essence of all efficient organization lies in due sub-division of labour and decentralization of responsibility among subordinates, each individual being given duties which can be performed adequately.

CHAIN OF COMMAND

A body of men becomes a fighting force when it works to the will and purpose of its commander; therefore, the number of men in a unit or the number of units which can be grouped together is dependent on the number of men or groups of units which can be controlled by one man: hence the necessity for organization into units and groups of units. Thus Infantry organization is based on the Section under its Section Commander; Sections are grouped under a Platoon Commander, Platoons under a Company Commander, and Companies under a Battalion Commander; and so it goes on up to Armies under a Commander-in-Chief. This ensures the "chain-of-command" which secures orderly manoeuvre by a number of units in accordance with a single plan.

UNIFORMITY ESSENTIAL

Organization ceases to be organization if it is not uniform. Only if it is uniformly organized in every part can a force be relied upon by its commander to carry out the same order in the same way. The organization of a force as laid down is therefore fixed and definite and must not be varied by subordinate commanders even to suit local circumstances.

3. The Infantry Battalion

The Battalion organization has seen many changes; "Battalion" originally implied a unit of infantry forming part of a line of battle. In the 14th Century the Battalion was the Tactical Unit, with an approximate strength of 1,000. The number of Companies to a Battalion since the 18th Century has frequently changed. In the British Army the number of Companies has varied from 8 to 13. Cromwell, 10. Marlborough, 12 and 13. Wellington, 10 and 11. In 1821 the establishment of 8 Companies was fixed.

The small bore rifle and smokeless powder used in the South African War resulted in greater dispersion of infantry, and

the Section replaced the Company as the Fire Unit. After the Russo-Japanese War, the 4 Company organization was adopted, with the Company the Tactical Unit, the Platoon and Section the Fire Unit.

CHANGES IN ORGANIZATION SINCE 1914

1. Britain began the war with 4 Companies and a machine gun section of 2 M.Gs. per Battalion. In 1915 the machine guns were withdrawn from Battalions and organized as Brigade Machine Gun Companies, which later developed into the Divisional Machine Gun Battalion. A light machine gun, the Bren Gun, is now an infantry weapon.

2. Battalion Headquarters during the course of the war assumed such large dimensions in both officers and men, partly due to position warfare but also due to new weapons demanding expert instructors, that the necessity arose of forming a Headquarters Company.

3. Difficulties of control in battle, heavy losses in Company Commanders, and conditions of position warfare appeared to indicate the Company as unsuitable as the Tactical or Fighting Unit. Therefore the Platoon became the Tactical or Fighting Unit, and the Section became the Fire Unit.

PRESENT ORGANIZATION

- 1 Battalion Headquarters.
- 1 Headquarters Company, consisting of :—
 - No. 1 Platoon — Signallers.
 - No. 2 Platoon — Anti-Aircraft.
 - No. 3 Platoon — Mortar.
 - No. 4 Platoon — Light Machine Gun.
 - No. 5 Platoon — Pioneer.
 - No. 6 Platoon — Administrative.
- 4 Rifle Companies, each Coy. consisting of a Headquarters and :—
- 3 Platoons, each Pln. consisting of a Headquarters and :—
- 3 Sections, each Sec. consisting of :—
- 1 Sec. Commander (a Corporal) and 7 men.

The command and administration of a Battalion is vested in an officer with the rank of Lieutenant-Colonel; to assist him, he has the following staff :—

Administrative Staff.

Special Staff and Company Officers.

The Administrative Staff consists of the 2nd-in-Command, Adjutant and Quartermaster, with a subordinate staff composed of the R.S.M., R.Q.M.S. and the Orderly Room Clerks. The Special Staff consists of the Signalling Officer, Carrier Platoon Commander, Intelligence Officer, Transport Officer, Medical Officer, etc., etc., with N.C.Os. as assistants to each. Five Company Commanders with Company Headquarters and Platoon Commanders.

THE SECTION

The Section is the unit upon which infantry organization is built. It is as large a number of men as can effectively handle their weapons under the direction of and be controlled by the voice of one commander in the fight. Tactical efficiency is obtained from a strength of 1 leader and 7 men. More men entail loss of control when extended. There are 3 Sections per Platoon, numbered from 1 to 9 throughout the Company. Each Section has 1 Bren Gun. *The Section is the Fire Unit.*

THE PLATOON

The Platoon is the Tactical or Fighting Unit upon which infantry formations are founded. The Platoon Commander is responsible for everything connected with his Platoon. With 3 Bren Guns, an anti-tank rifle and a 2-inch mortar, sufficient fire power is ensured to enable the Platoon to advance unaided against considerable opposition, providing the principle of "fire and movement" is adhered to and the Sections are resolutely led.

There are 6 Platoons in the Headquarters Company and 3 Platoons in each Rifle Company, numbered from 1 to 18 throughout the Battalion. *The Platoon is the Tactical or Fighting Unit.*

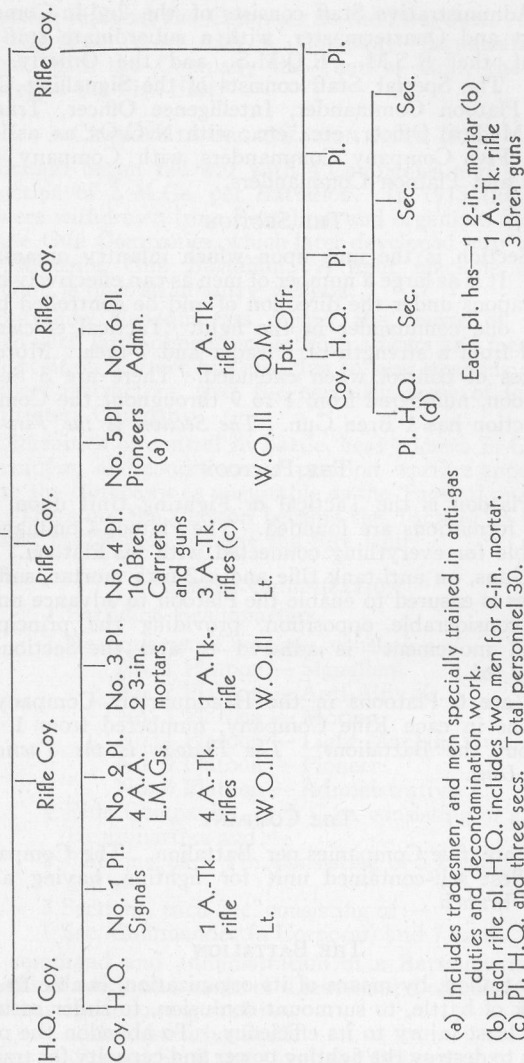
THE COMPANY

There are five Companies per Battalion. The Company is the smallest self-contained unit for fighting, having a "G" and "Q" branch.

THE BATTALION

The Battalion, by means of its organization, is able to stand the shock of battle, to surmount confusion, to suffer casualties with the least injury to its efficiency. To abandon the organization is to destroy the fighting power and capacity for training.

INFANTRY (RIFLE) BATTALION Bn. H.Q.



(a) Includes tradesmen, and men specially trained in anti-gas duties and decontamination work.

(b) Each rifle pl. H.Q. includes two men for 2-in. mortar.

(c) Pl. H.Q. and three secs. Total personnel 30.

(d) Nos. 7, 10, 13 and 16 pls. are commanded by subalterns, 8, 9, 11, 12, 14, 15, 17 and 18 by W.Os. III.

Each pl. has—1 2-in. mortar (b)
1 A.-Tk. rifle
3 Bren guns

"In future all platoons will be commanded by Officers".

An additional Anti-Tank Platoon has been added to the Bn., but is only with the Bn. when it is detached from its Brigade.

INFANTRY ANTI-TANK PLATOON

Platoon Headquarters

1 Lieutenant
1 Serjeant
1 Batman
1 Cook
2 Drivers (I.C.)
1 Private

7 Total

No. 1 Section

1 Driver (I.C.)
5 Gun Numbers

6 Total—All three Sections are identical.

No. 2 Section

No. 3 Section

25 Platoon Total

4. Organization of Divisional Troops

1. *Divisional Cavalry Regiment.*

i. *Regimental Headquarters.*

ii. *Headquarters Squadron* consisting of:—

iii. *Motor-Cycle Troop.*—All motor-cyclists have been concentrated in one troop under one officer. After allowing for the troop serjeant and police, 35 motor-cyclist orderlies are available. These will be sub-allotted to squadrons as required for normal inter-communication work within the regiment. In special circumstances they may be used for reconnaissance work which does not involve close touch with the enemy, such as watching an open flank, keeping an area under observation, etc.

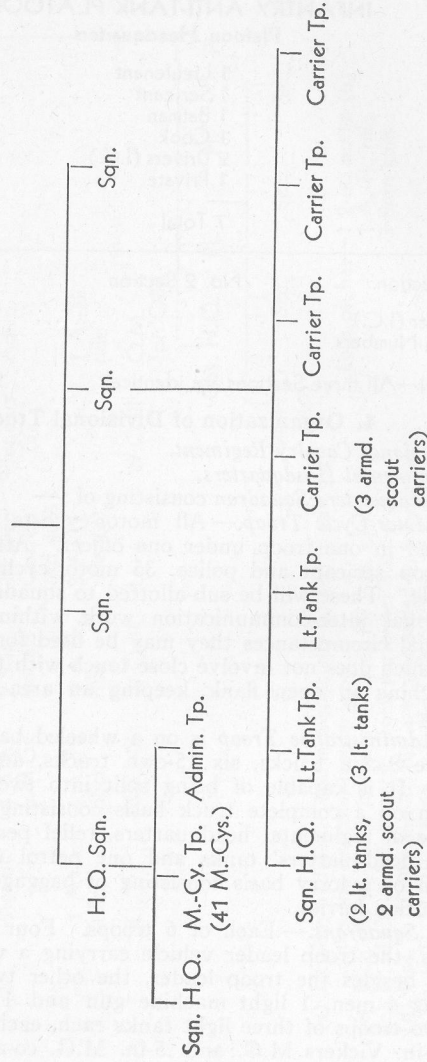
iv. *Administrative Troop* is on a wheeled basis and consists of three 8-cwt. trucks, six 15-cwt. trucks, and eight 30-cwt. lorries. It is capable of being split into two Echelons, "A" Echelon on a complete truck basis consisting of non-fighting portions of regimental headquarters, relief personnel for regimental headquarters' tanks and one petrol truck, and "B" Echelon on a lorry basis consisting of baggage, technical and ammunition lorries.

v. *3 Squadrons.*—Each of 6 troops. Four troops of three carriers, the troop leader vehicle carrying a wireless set, and 2 men besides the troop leader, the other two carriers each carrying 4 men, 1 light machine gun and 1 anti-tank rifle, and two troops of three light tanks each, each tank mounting a .303-in. Vickers M.G. and .5-in. M.G. co-axially mounted.

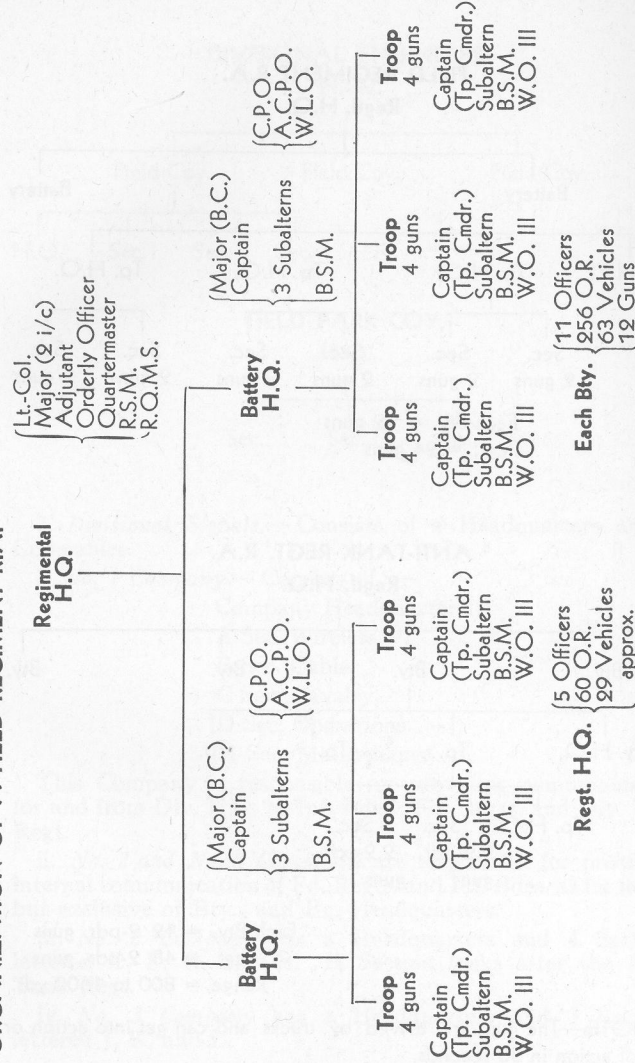
DIV. CAV. REGT.

Regt. H.Q.

(4 lt. tanks, 2 armd. scout carriers)

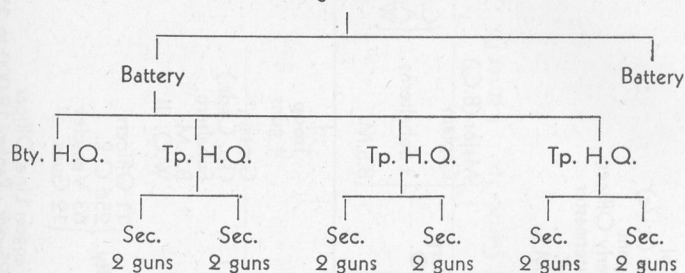


ORGANIZATION OF A FIELD REGIMENT R.A.

Regimental
H.Q.

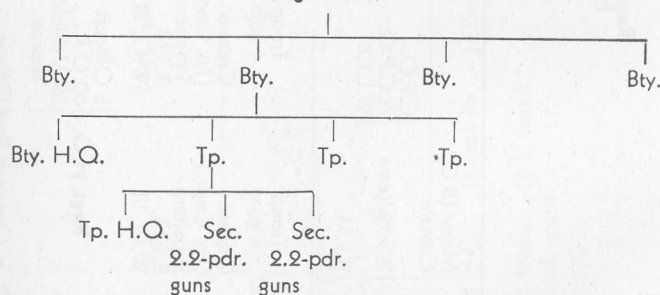
NOTE:—C.P.O. = Command Post Officer
A.C.P.O. = Asst. Command. Post Officer

W.L.O. = Waggon Line Officer
All guns are 25-pdr.; Range, 12,000 to 15,000 yds.

FIELD REGIMENT R.A.**Regtl. H.Q.**

Each Bty. = 12 guns

Regt. = 24 guns

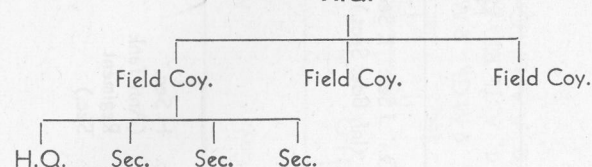
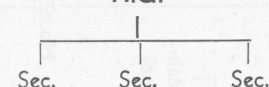
ANTI-TANK REGT. R.A.**Regtl. H.Q.**

Each Bty. = 12 2-pdr. guns

Regt. = 48 2-pdr. guns

Range = 800 to 1600 yds.

NOTE:—The guns are towed by trucks and can get into action or out of action in 30 seconds.

DIVISIONAL ENGINEERS**H.Q.****FIELD PARK COY.****H.Q.**

2. *Divisional Signals*.— Consists of a Headquarters and 3 Companies.

i. *No. 1 Company*.— Consists of :—

Company Headquarters.

A Sec. Wireless.

B Sec. Cable.

C Sec. Cavalry.

D Sec. Operations.

M Sec. Maintenance.

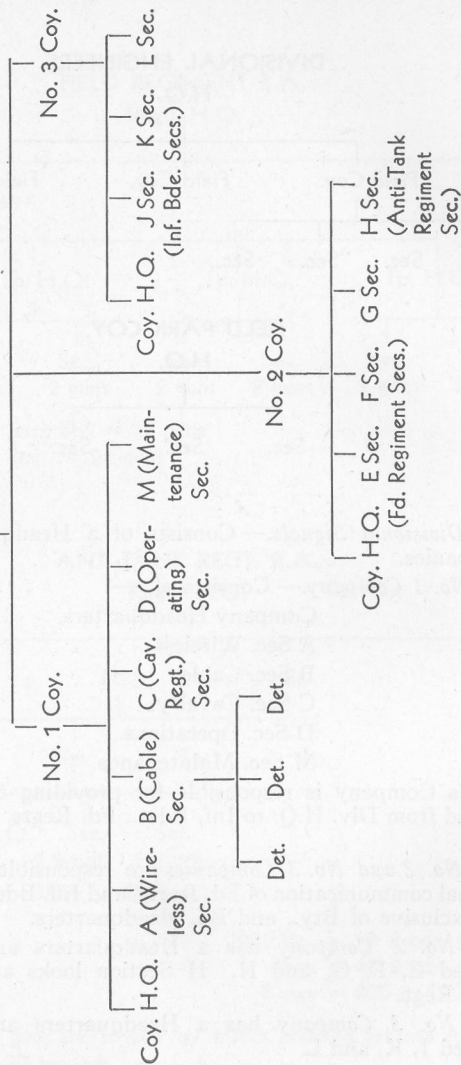
This Company is responsible for providing communication for and from Div. H.Q. to Inf. Bdes., Fd. Regts. and Div. Cav. Regt.

ii. *No. 2 and No. 3 Companies* are responsible for providing internal communication of Fd. Regts. and Inf. Bdes. as far down, but exclusive of Bty., and Bn. Headquarters.

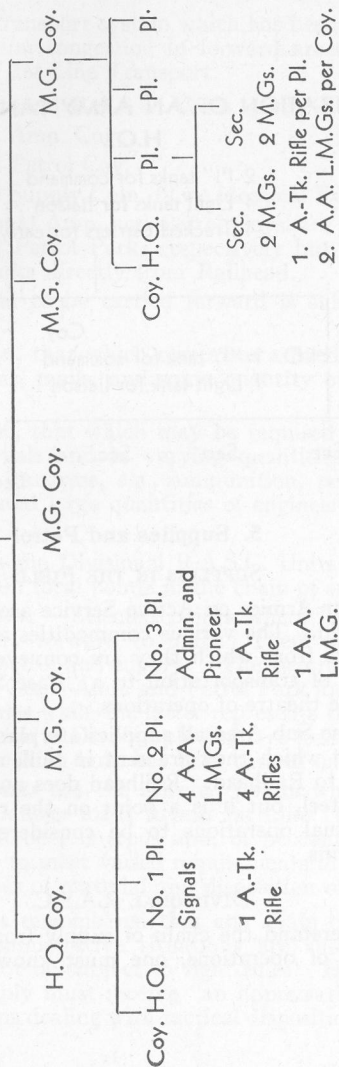
iii. *No. 2 Company* has a Headquarters and 4 Sections lettered E, F, G, and H. H Section looks after the Anti-Tank Regt.

iv. *No. 3 Company* has a Headquarters and 3 Sections lettered J, K, and L.

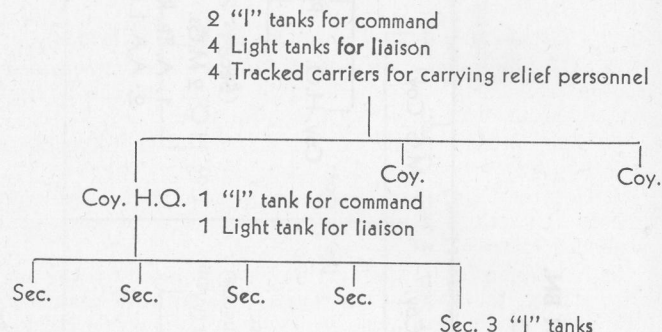
DIV. SIGNALS H.Q. Div. Sigs.



MACHINE GUN BN. Battalion H.Q.



ORGANIZATION OF AN ARMY TANK BATTALION H.Q.



5. Supplies and Petrol

SUPPLIES IN THE FIELD

Supplies for Armies on Active Service are collected from all over the world. The various commodities are gathered at the Home Depots from which they are conveyed by ship, rail or other means of transportation to a "Base Sub Area" located in or near the theatre of operations.

In this Base Sub Area all supplies are placed in Base Supply Depots, from which they are sent in bulk and as required in Pack Trains to Railhead. Railhead does not necessarily mean the end of steel, but it is a point on the railway far enough from the actual operations to be considered reasonably safe for Pack Trains.

DIVISIONAL R.A.S.C.

1. To understand the chain of supply from Railhead to the actual scene of operations, one must know the organization

of the R.A.S.C. transport system which has been made in order to obtain minimum congestion in forward areas and to meet mechanization of 1st Line Transport.

2. i. The Divisional R.A.S.C. Units, are:—

Divisional Amn. Coy.

Divisional Petrol Coy.

Divisional Supply Coln. (Two identical Echelons).

ii. The Divisional Amn. and Petrol Coys. are replenished by Corps Amn. and Petrol Parks respectively but the Divisional Supply Coln. works directly from Railhead.

3. The material to be carried forward is sub-divisible into two natures:—

i. Constant, *i.e.*, that which comprises a fixed daily requirement, *e.g.*, rations, mails, and some quantity of engineer and ordnance stores.

ii. Variable, *i.e.*, that which may be required by the troops at varying intervals and in varying quantities according to the operation in progress, *e.g.*, ammunition, petrol, blankets, reserve clothing and large quantities of engineer and ordnance stores.

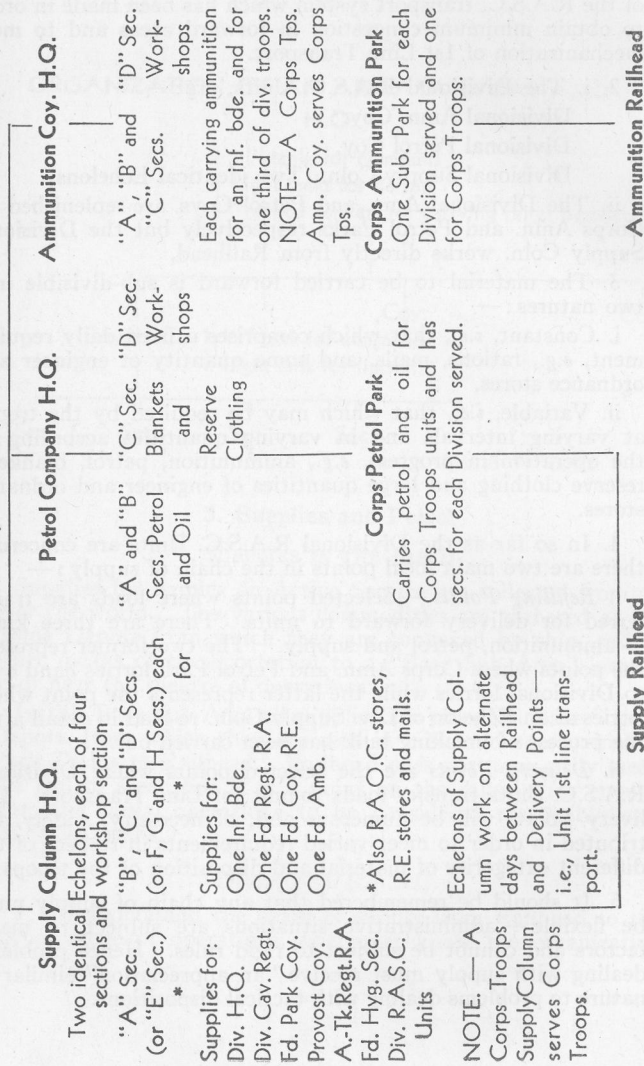
4. In so far as the Divisional R.A.S.C. Units are concerned there are two main focal points in the chain of supply:—

i. *Refilling Points*—Selected points where loads are transferred for delivery forward to units. There are three kinds—ammunition, petrol and supply. The two former represent the points where Corps Amn. and Petrol Park lorries hand over to Divisional lorries while the latter represents the point where lorries of an Echelon of Div. Supply Coln. re-load in detail after the process of breaking bulk has been carried out.

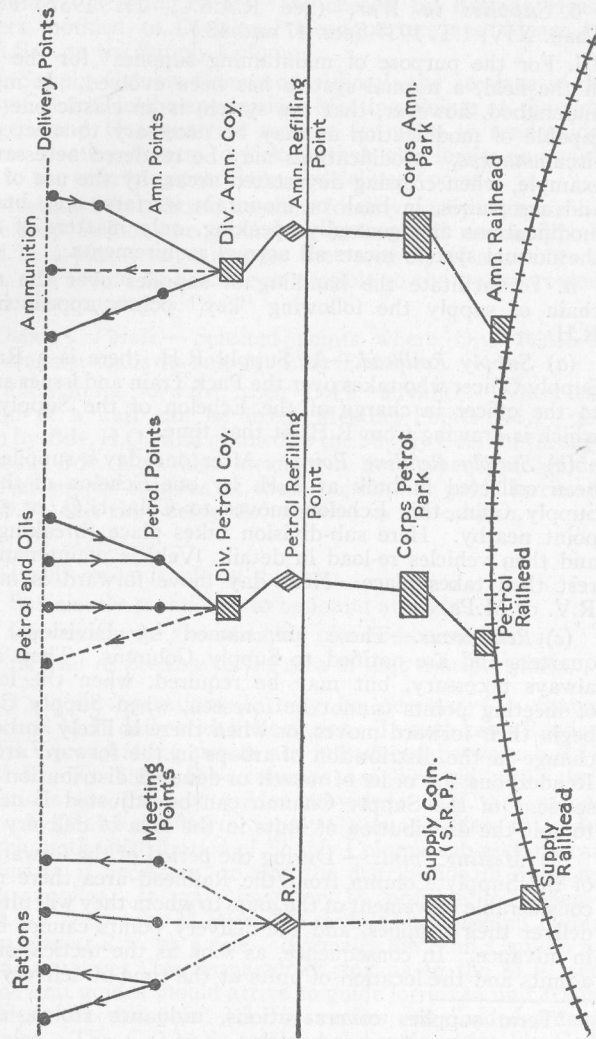
ii. *Delivery Points* are the selected points where Divisional R.A.S.C. Units transfer loads to unit 1st Line Transport. Delivery Points will be numerous and, of necessity, widely distributed in order to meet varied requirements in respect of the different categories of material and disposition of the troops.

5. It should be remembered that any chain of supply must be flexible—administrative situations are subject to many factors and cannot be subject to rigid rules. Hence problems dealing with supply must receive "an appreciation" similar in nature to problems dealing with tactical dispositions.

R.A.S.C. ORGANIZATION FOR A DIVISION C.R.A.S.C. (Div. H.Q.)



The Supply System Forward of Railroad



6. *Supplies in War.* (See R.A.S.C. Tr. 1937, F.S.R.I. Chap. XIV, I.T. 1937 Secs. 47 and 48.)

i. For the purpose of maintaining supplies* for the troops in the field, a normal system has been evolved. It must be understood, however, that the system is an elastic one and is capable of modification as may be necessary to meet special circumstances. Modifications may be rendered necessary, for example, when crossing devastated areas, by the use of tanks and aeroplanes, in bush or mountain warfare, etc., but such modifications are, generally speaking, only matters of detail; the normal system meets all normal requirements.

ii. To facilitate the handling of supplies over the normal chain of supply the following "key" points appear incl. of R.H. :—

(a) *Supply Railhead.*—At Supply R.H. there is a Railhead Supply Officer who takes over the Pack Train and issues supplies to the officer in charge of the Echelon of the Supply Coln. which is drawing from R.H. at that time.

(b) *Supply Refilling Point.*—After one day's supplies have been collected in bulk at R.H. by one Echelon of the Div. Supply Coln. this Echelon moves to Coln. H.Q. or suitable point nearby. Here sub-division takes place (breaking bulk) and then vehicles re-load in detail. Vehicle maintenance and rest then takes place. Next day move forward is made to R.V. or M.Ps.

(c) *Rendezvous.*—These are named by Divisional Headquarters and are notified to Supply Columns. They are not always necessary, but may be required, when the localities of meeting points cannot be foreseen, when Supply Columns begin their forward moves, or when there is likely to be much change in the distribution of troops in the forward area. At Rendezvous the order of march or detailed distribution of sub-sections of the Supply Column can be adjusted if necessary to suit the distribution of units in the area of delivery points.

(d) *Meeting Points.*—During the period of the forward move of the Supply Column from the Railhead area there may be considerable movement of the units to whom they will ultimately deliver their supplies, and the delivery points cannot be fixed in advance. In consequence, as soon as the tactical situation admits and the location of units at the time of delivery can be

*Term supplies covers rations, ordnance stores, engineer stores, canteen stores and mails.

determined, "Meeting Points" are chosen by Brigade Headquarters, notified to Divisional Headquarters and thence by C.R.A.S.C. to the Supply Column.

The Supply Column Commander directs the sections of the Supply Column to the appropriate Meeting Points at the time arranged, and Headquarters arrange for units to send guides to these Meeting Points, to pick up their own lorries and guide them to the unit transport lines, the delivery point.

A Meeting Point should be some locality easily recognizable on the map and on the ground in darkness, if necessary. It should be a place convenient for the assembly of a number of lorries, and should be as close as possible to the transport lines of the units concerned.

7. *Delivery Points.*—Selected points where Div. R.A.S.C. Units transfer loads to unit 1st Line Transport.

As units move forward, their D.Ps. advance. When the position of a unit can be fixed, Meeting Points (M.P.) are chosen by Bde. H.Q., and notified to the Supply Column through Division. Bde. H.Q. also arranges a time when unit guides will meet supply sections at these points and guide lorries to their D.P., this time being also notified to the column.

8. *M.Ps. should be:*—

- i. Easily recognizable on the map.
- ii. Sufficiently prominent to be found at night.
- iii. Convenient for the assembly of a number of lorries.
- iv. As near as possible to the area of unit transport lines.

9. In mobile operations it may be necessary to change S.R.H. and M.P. daily with little notice. In such cases Rendezvous (R.V.) or halting points are introduced between S.R.H. and M.P. To these R.V. columns are directed until their destinations are fixed or guides provided. R.V. are named by Div. H.Q. and notified to Supply Columns. Here the order of march or the distribution of Supply Column sub-sections can be adjusted, if necessary, to suit the distribution of units receiving supplies. It may, however, be possible to dispense with R.V. Orders for M.P. will be received by Supply Column Commander at R.V. as a rule. Normally the Staff Captain at Bde. H.Q. notifies Quartermaster of unit as to the M.P. and the time unit guides should arrive to guide lorries to unit transport lines. At this point (D.P.) supplies are divided among companies. The C.Q.M.S. receives the rations for his Coy.

Rations may be issued in several ways depending on circumstances:—

i. Cookers may move up close behind Companies and hot food carried to Platoons.

ii. Rations may be cooked at transport lines and issued cold to Platoons after dark.

iii. Preserved rations may be issued.

10. Communications are maintained from rear to front by motor-cycle orderlies each rear Ech. providing the orderly for the Ech. next in front.

11. The normal period covered by the issue of the ration is from midnight to midnight, including breakfast, mid-day meal and evening meal in that order.

12. On Tuesday, 1 Ech. is coming forward with Wednesday's supplies. The normal supply situation in the Bn. at 1800 hrs. Tuesday will be:—

i. Each officer and man carries an emergency ration which may not be consumed unless no other rations are available, and then only by order of an officer. It must be inspected periodically.

ii. The Bn. also carries the unconsumed portion of Tuesday's rations, which have probably been consumed, or at least issued, by 1800 hrs.

iii. Wednesday's supplies are in 1 Ech., probably en route to the Bn.

iv. Thursday's supplies are in 2 Ech.

v. Friday's supplies are in Pack Train en route to S.R.H.

vi. The Qr.-Mr. has indented for Thursday's supplies only. He therefore makes out A.B. 55, showing the actual strength on Tuesday, allowing for casualties and reinforcements officially notified. A.B. 55 is received by the Brigade R.A.S.C. Officer at the Meeting Point on Tuesday night, and the Senior Supply Officer at Railhead will receive it Wednesday, the day on which 1 Ech. unloads Friday's supplies from the Pack Train.

13. When supplies are delivered to Tpt. lines or Fd. kitchens, they are distributed to men under unit arrangements.

14. When 1 Ech. delivers Tuesday night, it re-assembles at one or more convenient positions, whence it will return to column H.Q., if the time permits, preparatory to loading at S.R.H., on Wednesday.

15. The Bde. R.A.S.C. Officer was called, formerly, Bde. Supply Officer. He is available for technical advice and handles petrol, supplies and ammunition.

16. *Indents for Supplies.*—An indent (A.B. 55) is made out daily by every unit (Quartermaster), for supplies for consumption on third day after rendition.

Supply Officer, at Bde. H.Q. or equivalent, normally receives these indents from units at the meeting points each evening, and they are handed to the Senior Supply Officer at Railhead the following day for the supplies to be loaded at Railhead that day for consumption two days later. Thus, A.B. 55 made out by the unit on Sunday evening reaches Railhead on Monday; supplies are loaded that day and delivered to units on Tuesday evening for consumption on Wednesday.

It will be seen therefore that the normal supply situation at any given time can be approximately stated, assuming that railway trains are running reasonably to time and that there is nothing abnormal in the tactical situation affecting supply arrangements. The principle being that there should always be two days' supplies in advance of Railhead in addition to the current day's food.

17. *Supply of Petrol and Lubricants.*

i. With the disappearance of the horse, the supply of petrol has greatly increased in importance and has therefore been given a separate chain of supply.

This chain differs somewhat from that of supplies as demands are not a daily fixture. It also differs from that for amn. supply as demands are not likely to be subject to sudden and violent fluctuations.

ii. All units (except small units such as Fd. Coys., etc.) have on their establishment one or more vehicles for the carriage and distribution of spare petrol (50 miles per vehicle average figure). Each vehicle has a certain radius of action on a "full tank," (180 miles average figure).

It can be seen from this that only on odd occasions will vehicles of fighting units require a *daily* replenishment from outside the unit resources.

Further it can be seen that by careful Staff Duties expenditure can be forecasted and replenishment regulated to suit the requirements of the situation.

iii. Replenishment of Units within the Division is carried out by the Div. Petrol Coy. This unit carries a reserve on wheels

equivalent to 50 miles per unit vehicle. Being a divisional unit it will normally be well forward if much movement is going on but under static conditions may be back in the Corps area.

Procedure of replenishment may vary but under most conditions is as follows:—

(a) Division "Q", in conjunction with S.Cs. of Inf. Bdes., etc., estimate likely consumption and likely disposition of the Tps. and a decision is arrived at as to the number of Petrol Points (P.Ps.) to be established and their strength.

Note: Naturally C.R.A.S.C. at Div. and Bde. Supply Officers will be consulted. Also see proviso when demand is likely to be beyond capacity of unit petrol vehicles.

(b) These P.Ps. are points where sub-units of Div. Petrol Coy. proceed to meet and replenish unit petrol vehicles (units having been informed of location and time). If demand is beyond capacity of unit petrol vehicles, supply will be taken forward by Div. Petrol Coy. vehicles to D.Ps. Units will be responsible for guides and for distribution within unit.

(c) Div. Petrol Coy. refills at P.R.P. from vehicles of Corps Petrol Park.

(iv.) No indent is required in advance for petrol or oils but a demand is made on A.B. 55.

18. Blankets.—

i. One section of the Div. Petrol Coy. carries these for Div. H.Q., Inf. Bns. and Fd. Hygiene Secs. Remainder of units carry own in 15-cwt. tpt.

ii. Div. "Q" ascertains from Inf. Bdes. (and attached tps.) and other Div. Tps. requirements, and also most suitable points for delivery (and time).

Units collect in their own tpt. from points decided upon and make own distribution. Collection follows same procedure.

Note: A 15-cwt. truck carries 10 bales of 25 blankets. Sec. Div. Petrol Coy. carries 8000 blankets.

19. Spare Clothing.—

i. Spare clothing (comprising sufficient for approx. 3% of strength of Div.) is carried in "blanket" sec. of Div. Petrol Coy.

This reserve is for rapid replacement of that of tps. contaminated by gas.

It is issued under authority of the D.A. D.O.S. at Div.

ii. A Div. reserve of anti-gas capes and equipment (about 25% of unit scales) is also carried in the "blanket" sec. of Div. Petrol Coy.

In all probability this reserve will be held on wheels near Div. H.Q. so that rapid delivery can be made.

20. Supply on the Battlefield.—

i. *General.*—The soldier's requirements in battle are many — ammunition, food, water, tools, R.E. stores, ordnance stores, medical stores, and creature comforts such as cigarettes, to mention only a few of them.

The process of obtaining these requirements and conveying them to the individual soldier may be conveniently divided into two main parts:—

(a) The general provision of supplies in bulk and their conveyance to certain pre-determined places under arrangements made by the staffs of formations.

(b) The conveyance forward from these points, and their distribution to individuals, under unit arrangements.

With sound organization, training, experience and good staff work, the first of these is comparatively easy. The second part, however, often presents very considerable difficulties, calling for the exercise of much tact, determination, ability and common sense.

ii. *Unit Transport.*—Unit Transport consists of vehicles forming an integral part of the war establishment of the unit, and is allotted to it for the carriage of ammunition, stores and supplies of all kinds.

iii. *Unit Transport — Division into Echelons.*—The transport allotted to a unit in its war establishment is generally speaking adequate to meet all requirements in open warfare. This transport is partly connected with the actual business of fighting, such as the vehicles allotted for the carriage of ammunition, light machine guns and tools; and partly with the conveyance of the more creature necessities of the man, such as vehicles for cooks, and water. Thus unit transport can conveniently be divided into two Echelons, "A" Echelon consisting of vehicles essential for the immediate fighting efficiency of the unit, "B" Echelon of the remainder.

During active operations such as moves, "A" Echelon transport will normally remain in unit control, under the immediate command of Sub-Unit Comds. or Unit Transport Officer, while

the "B" Echelons are brigaded together under outside control, *i.e.*, Bde. or Div.

It should be noted that W.Es. are designed to have the minimum of tpt. in the field. Therefore separation of "B" Ech. is only made to meet abnormal circumstances at the moment and units should have full control of *all* their tpt. whenever possible.

To take the case of an infantry battalion, for the sake of example, the following is a suggested division of the unit transport into "A" and "B" Echelons when necessary—:

"A" Echelon —

35 Bicycles.

11 Motor-cycles.

1 Car (four-seater).

7 Trucks, 8-cwt., (Officers).

1 Truck, 15-cwt., medical equipment.

3 Trucks, 15-cwt., S.A.A. reserve.

2 Trucks, 15-cwt., light machine guns, A.A. and ground

1 Truck, 15-cwt., signalling stores. [defence.

2 Trucks, 15-cwt., mortars.

1 Truck, 15-cwt., mortar reserve ammunition.

16 Trucks, 15-cwt., S.A.A., tools, grenades (platoon trucks).

1 Truck, 15-cwt., Bn. Office.

1 Truck, 15-cwt., Pioneer and decontamination stores.

1 Truck, 15-cwt., Carrier Pl.

Note: There are also 10 Bren Carriers in the Carrier Platoon.

"B" Echelon — (normally brigaded under brigade H.Q. control) —

3 Motor-cycles. (two for police).

2 Trucks, 8-cwt. (Officers).

2 Trucks, 15-cwt., light machine guns, A.A. and ground.

1 Lorry, 30-cwt., Officers' Mess.

1 Lorry, 30-cwt., M.T. stores and fitters.

5 Lorries, 30-cwt., cooks.

2 Lorries, 30-cwt., baggage.

1 Lorry, 30-cwt., petrol.

2 Trucks, 15-cwt., water-tank.

2 Lorries, 30-cwt., anti-gas capes and reserve clothing.

iv. *Communications.*— Communications must be maintained by each Echelon of transport, whatever its nature, by means of Orderlies with the Echelon next in front to which it normally delivers its supplies, whatever nature they may be.

v. Duties of Commanders of Echelons or any "grouping" of tpt. are summarized as follows:—

(a) To keep in touch with the general tactical situation at all times.

(b) To anticipate and meet all demands for supplies of any and every kind from the units and Echelons served.

(c) To ensure the smooth working of communications.

(d) To study the country in which he is operating, both on the ground with maps and with aeroplane photographs if available, with a view to selecting lines of advance for transport conveying supplies of all natures.

(e) To attend to the concealment, protection, comfort, rest and care of the men, and vehicles under own immediate command.

(f) To collect and pass on to subordinates the information which they will require for the efficient performance of their own duties.

6. Principles of Ammunition Supply

1. The following general principles should be realized:—

i. Ammunition must be passed systematically and automatically from rear to front.

ii. Careful arrangements for amn. supply must form part of every plan of operations, (every situation must be appreciated).

iii. Amn. will normally be kept loaded on tpt. provided for that purpose and Echelons kept full.

iv. Each Echelon must be constantly aware of the position of, and be in communication with, the Echelon next in front of it.

v. That the term ammunition is a broad one and includes Arty. (H.E., smoke and 2-pdr. gun), A.-Tk. rifle, S.A.A. (for light and heavy M.Gs., rifles and pistols), Mortar (2" and 3"), Grenades, fireworks and explosives.

2. Each unit has its own scale of ammunition, *i.e.*, on the man, with the gun or in unit vehicles.

Note: Scales are laid down in W.Es. These need not be studied in detail but should be considered generally when W.Es. are made available.

3. i. Replenishment of unit requirements within the Division is carried out by the Div. Amn. Coy. which carries a quota of all natures of ammunition. The location of this company will be dictated by tactical requirements, (accommodation not

easy) but in principle it will be *kept concentrated* and be located in an area sufficiently far forward to ensure rapid delivery *on demand*. There are motor-cycle orderlies on establishment for attachment to consuming units.

ii. As the distribution of units in battle varies with each particular operation and as expenditure varies not only in quantity but in nature of amn., any system of supply must be flexible:—

(a) The simplest system is for amn. lorries to be sent direct from amn. coy. to D.Ps., (may be Bty. positions, arty. and inf. tpt. lines or specially created reserves).

(b) As against this, the tactical situation, the distance to be covered, traffic congestion or lack of good roads may necessitate portions of the Div. Amn. Coy. being detached and located in more forward positions. These detachments are termed ammunition points (A.Ps.) and may vary from a few lorries to a complete section or sections. The position of A.Ps. will be determined and promulgated to all concerned by the staff (Div. Q. in consultation with G., R.A. and Inf. Bdes.). The number of A.Ps. within a formation will be kept to a minimum.

(c) Whether or not an A.P. is formed, arty. demands are normally consolidated regimentally and M.Cy. Orderly guides amn. coy. vehicles (complete vehicle loads to avoid waste of effort) to D.Ps.

In case of inf. demands, complete vehicle loads of any one type of amn. are not often required and it would not be economical to send vehicles "touring." Therefore, normally, consuming units collect from A.P. For this purpose separate A.Ps. will be required within easy reach.

(d) No indent is required for amn. but receipts will be given.

(e) An essential for the efficient supply of amn. is good staff work and good staff work depends on a clear assessment of the existing situation.

4. i. The consuming unit unboxes amn. Return of empties must not be overlooked.

ii. It is inadvisable in mobile operations to dump amn. At the same time estimated expenditure of arty. amn. may be such that normal supply arrangements will hardly suffice. The solution to this problem rests in careful staff work in conjunction with Comds. Fd. Regts.

5. i. The Div. Amn. Coy. replenishes at A.R.P. from vehicles of the Corps Amn. Park. Amn. is received at this point sorted by lots, groups, types and varieties.

ii. It should be noted that sections of amn. companies and those of Corps Amn. Park are of identical composition and carrying capacity. They are therefore inter-changeable as a temporary measure.

ORDNANCE SERVICE

The Ordnance Manual (War) 1931, Sec. I. gives the functions of Ordnance Units in the field, which generally are concerned with the issue and maintenance of M.T. vehicles, supply of clothing and equipment, care of guns and ammunition, the organization of depots for stores, accounting of stores and repairs to them.

MEDICAL SERVICE

For functions of Medical Units in the field, vide R.A.M.C. Training, 1935, Chap. 12 and 13, also F.S.R. Vol. 1. Sec. 68 and Chap. 5.

PROVOST SERVICE

The Div. Provost Coy. supervises traffic control in the Div. area. In forward areas this duty is done by regimental police under Bde. control.

DIV. POSTAL UNIT

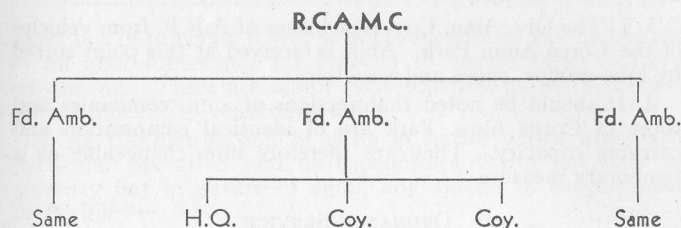
A detachment of Div. Postal Unit takes over mail duties at R.H. and another detachment is with the Div. Supply Coln. which delivers all mail, except registered letters, to D.Ps.

7. Evacuation of Casualties

1. The Head of the Medical Service is represented at the H.Q. of a Division by an Assistant Director of Medical Services (A.D.M.S.). In addition to his administrative duties he acts as comdr. of the medical units with the Division.

Medical Officers are attached to the H.Q. of units as shown in War Establishments.

There are 3 Field Ambulances with each Division. Each Fd. Amb. has a H.Q. and 2 Coys.



2. *Zones of Evacuation.*—The evacuation of casualties is done through 3 zones:—

i. *Collecting Zone.*

Medical establishments of units.
Fd. Ambulances.
Motor Ambulance Convoys. (M.A.C.)

ii. *Evacuating Zone.*

Casualty Clearing Stations. (C.C.S.)
M.A.C.
Ambulance trains, aircraft and barges.

iii. *Distributing Zone.*

Hospitals.
Convalescent depots.
Hospital ships, etc.

3. *System of Dealing with Casualties in Action.*—

i. Every officer and man carries two identity discs and a first field dressing. All are trained in the use of the first field dressing.

ii. Regt. Stretcher Bearers are employed in rendering first aid to the wounded and collecting and carrying them, with their arms and equipment, to R.A.Ps. or to safe cover. Places at which wounded are collected should be marked. Regt. Stretcher Bearers do not carry wounded further back than R.A.P.

When a considerable number of wounded is anticipated it will frequently be necessary to increase the number of stretcher bearers.

iii. At R.A.P. attention is given to the wounded by the medical establishment of the unit. Wounded able to walk are directed to the W.W.C.P. Wounded unable to walk are removed by the Stretcher Bearers of the Fd. Amb. to the

A.D.S. Hand carriage, wheeled stretcher, horse or motor transport and prisoners of war may be used.

iv. At A.D.S. dressings may be adjusted and the wounded revived by hot drinks and bodily warmth. From A.D.S. the wounded are cleared as rapidly as possible to M.D.S. by road transport of fd. amb.

v. At M.D.S. urgent surgical operations may be performed, dressing and splints adjusted and the necessary clerical work to obtain a record of admission is carried out.

Arms and equipment of wounded are collected at M.D.Ss. and disposed of under Div. arrangements. Personal kits remain with the casualty. Amn. should be removed before the casualty is sent to the rear.

vi. From M.D.S. wounded are evacuated to C.C.S. by the Motor Ambulance Convoys.

vii. Walking wounded are cleared from W.W.C.Ps. to M.D.S. in a similar manner as those from A.D.S., except that when road transport cannot be made available, the O.C. Fd. Amb. concerned will arrange to conduct by march route under the care of medical personnel.

viii. In rear of C.C.S. evacuation is:—

From C.C.S. by Ambulance Train or M.A.C. to general hospitals.

From general hospitals cases may be invalided out of the theatre of war, discharged to convalescent depots or to base depots if fit for duty.

4. *Field Hygiene Sections.*—Fd. Hyg. Secs. act as Sanitary Police and carry out sanitary measures requiring skilled knowledge beyond that possessed by the troops.

Their principal duties are:—

Disinfection of billets and clothing.
Protection and purification of water.
Advice to unit's sanitary personnel.

5. *Sanitation.*—Every unit is responsible for its own sanitation and for the sanitary condition of the area occupied. Regt. Sanitary Det. works under Regt. M.O. Duties of sanitary personnel in a unit are to act as Sanitary Police and to supervise:—

i. Preparation and care of latrines and urinals.
ii. Collection, removal and disposal of refuse.
iii. Construction of ablution places and disposal of waste water.

iv. Sanitation of cooking places, animal lines and slaughtering places.

6. *Water Supply.*— Duties of Regt. Water Duties personnel are:—

i. Daily supervision of water supply and its purification for drinking purposes by boiling, filtration or the addition of chemicals.

ii. Take charge of all apparatus and stores connected with water supply of the unit.

7. *Reporting Casualties.*—

i. By O.C. unit in which casualty occurs.

Officers— Personal number and name of offr. and nature of casualty telegraphed daily on Daily Strength State to 2nd Ech. at base and confirmed by post on Casualty Return—Offrs. daily or as often as practicable.

O.Rs.— Total number of casualties to O.Rs. telegraphed daily on Daily Strength State to 2nd Ech. Ranks and names of O.Rs. and nature of casualty sent by post daily or as often as practicable on Casualty Return O.R. to 2nd Ech.

Copies of the above states and returns are rendered daily to Bde. for transmission to Div. H.Q. Field Returns for officers and other ranks are rendered weekly, made up to midnight on each Saturday.

ii. *By O.C. Fd. Amb.*— Reports of deaths of offr. telegraphed at once to 2nd Ech. and confirmed by post the same day. Reports of death of O.Rs. as they occur sent by post to 2nd Ech. Weekly reports of all admissions, discharges, transfers and deaths to 2nd Ech.

iii. *By C.C.S.*— In addition to reporting casualties similarly to O.C. Fd. Amb., the names of the dangerously ill list and any change in condition telegraphed to 2nd Ech. daily.

iv. *Offr. i/c 2nd Ech.*— Telegraphs daily to Casualty Sec. War Office all reports received. W.O. notifies next-of-kin.

8. *Classification of Casualties.*—

Killed in action.

Died of wounds.

Wounded (nature of wound to be stated if possible).

Wounded remaining at duty.

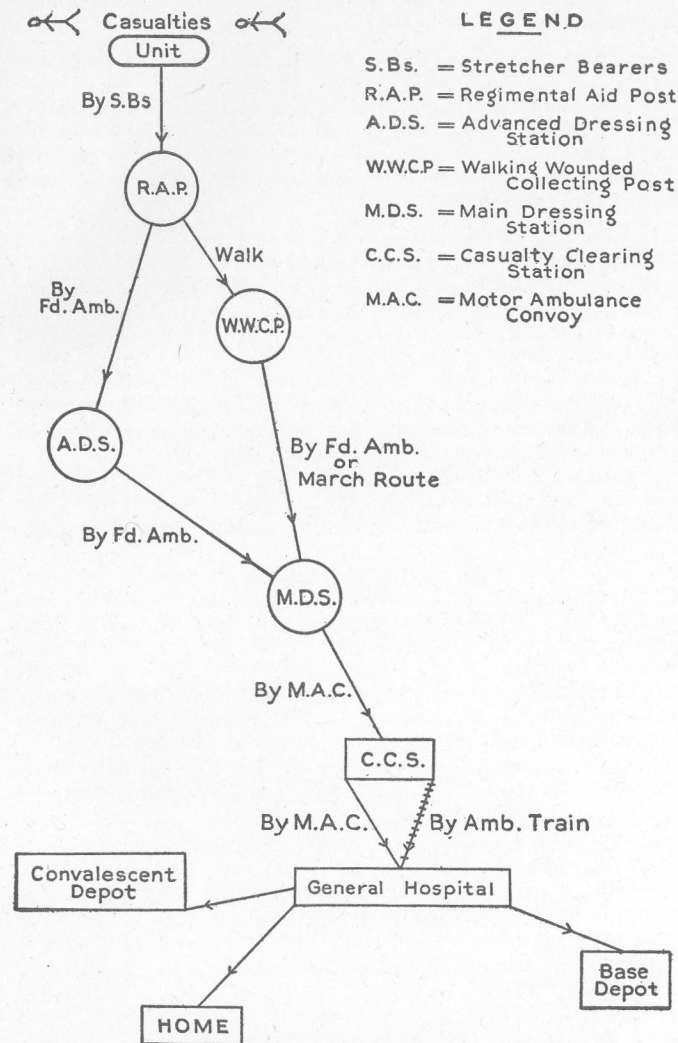
Missing.

Neurological and gas cases are classified respectively as:—

Sick (N.Y.D.N.).

Sick (N.Y.D.G.).

until a definite diagnosis has been established.



CHAPTER II

DUTIES

8. Duties

Duties are those services which an Officer or soldier may legally be called upon to perform in his capacity as a soldier, in turn according to roster.

1. *Roster*.—A Roster is a tabulated form of register containing names of corps or individuals as may be required for duty purposes.

Three kept in a Unit :

- i. Officers, by the Adjutant, by seniority.
- ii. W.Os. and N.C.Os., by the R.S.M., by seniority.
- iii. Men's Roster, alphabetically by Sections, by the Coy-Orderly-Sjt., under the supervision of the Coy-Sjt-Major.

2. *Classification of Duties*.—Duties are classified according to seniority and are as follows:

- | | |
|----------------------------------|--|
| i. Guards of Honour | SOVEREIGN
ROYAL FAMILY
Viceroys
Governor of a Colony
Commander-in-Chief, abroad. |
| ii. Duties under arms | Divisional
Brigade or Garrison
Regimental |
| iii. Courts-Martial | General
District |
| iv. Boards and Courts of Inquiry | Divisional
Brigade or Garrison
Regimental |
| v. Working Parties | |
| vi. Fatigues | |

3. *Daily Routine*.—The daily routine for Garrisons and Camps is more or less standard, and is promulgated in Garrisons and Camps Standing Orders.

i. *Reveille*, is a Bugle Call sounded at sunrise, or some stated hour when troops are expected to rise.

ii. *Retreat*, is a Bugle Call sounded at sunset, or some stated hour when the Flag is lowered and after which no compliments will be paid.

iii. *Tattoo*, is the time which elapses between First and Last Post, after which all men out without a pass are reported absent. On Last Post sounding, the Battalion Orderly Serjeant parades all the various Orderly N.C.Os. and the Coy. Orderly Serjeant in line; after dressing them, he reports to the R.S.M. "All present, Sir." The R.S.M. then queries each individual on the parade by naming the Company, Picquet, Gate, Canteen, etc., for which he is that day the Orderly N.C.O.; the latter then informs the R.S.M. whether things are correct or otherwise, e.g., "5 men absent, Sir," or "All present, Sir," or "Canteen closed and correct, Sir."

After collecting these reports, the R.S.M. reports to the Orderly Officer with his information, who then issues any instructions he may deem necessary before ordering the R.S.M. to dismiss the parade.

iv. *Company Office*, is that period of the day when the Coy. Comdr. deals in his office with military offences, complaints, interviews, etc. Coy. Office must be held sufficiently in advance of Orderly Room, the Commanding Officer's domain, to enable all Coy. matters to be disposed of before the Orderly Room Parade. Soldiers in arrest should be marched under escort to the Coy. Office, and also to the Orderly Room. The accused soldiers remain outside both Coy. Office and Orderly Room until their cases are called, when, after their head-dress is removed, they are marched in with their escort and evidence, the whole party standing in line opposite the Coy. Comdr. or the C.O. as the case may be.

The Charge Report is then read by the C.S.M. if in Coy. Office, by the Adjutant if in the Orderly Room. The first evidence is then called by rank and name by the Officer dealing with the charge.

All ranks should be instructed in the proper way of giving evidence, which should be brief and factual, e.g., "Sir, I was N.C.O. on Gate Duty on the 10th inst. The accused returned to Barracks at 2230 hrs. He was drunk. I confined him."

After all the evidence has been taken, the accused is asked if he "has anything to say"; if the accused desires to call evidence in his own behalf, he should be allowed to do so. After this evidence has been taken, the Coy. Comdr. either makes his award or refers the case to the C.O. After the C.O. has made

his award, he writes it at the same time in the Guard Report, the Adjutant writing it in red ink on the Charge Report.

After the award has been given, the accused with the escort and evidence are marched out.

In the Orderly Room the Coy. Comdr. of the accused must be present with his Coy. Conduct Book as reference to a man's previous character. The Officer dealing with the case should not refer to the conduct sheet of the accused until after he has made his decision as to the innocence or guilt of the accused from the evidence.

4. *Guards.*—

i. There is no situation in which soldiers are so conspicuously placed as when upon Guard; they are then exposed to constant observation, and the honour and character of the Corps become, in consequence, more than ever in the keeping of the individual, be his rank ever so humble.

Everyone is aware of the impression made upon his mind when he sees Reliefs marching irregularly, Sentries lounging lazily upon their posts, the men lying about upon the benches, their tunics half-buttoned, accoutrements disarranged, and their caps carelessly put on; he never expects to find that such slovens belong to a battalion in a good state of discipline.

ii. Guards should turn out at commencement of Reveille, Retreat and Tattoo, and be inspected by the Officer or Non-Commissioned Officer commanding them.

iii. Officers, Non-Commissioned Officers or soldiers should not on any account take off their clothes or accoutrements while on Guard, but the wearing of the greatcoat in the Guard Room while optional, must be consistent.

iv. No man on the Guard should ever be seen smoking outside the Guard Room, or in any head-dress other than that in which the Guard was mounted.

v. No soldier of a Guard should be employed in holding a horse, or in any other way unconnected with the orders of his Guard.

vi. Should a man be taken ill on Guard, a report is immediately to be sent to the Orderly Officer, who at once sees that one of the waiting men is sent to relieve him.

vii. In case of fire or other alarm the Guard will turn out and remain under arms until otherwise directed.

viii. When an Officer visits Sentries, he should be accompanied by a Non-Commissioned Officer of the Guard, and when a Non-Commissioned Officer visits his Sentries, he likewise takes a man or file of men.

ix. The meals of all on Guard should be brought to them, but if at too great a distance, arrangements should be made for them being taken, or sent and cooked in the Guard Room.

x. Guards, on being relieved, should march to their Battalion Parades and be dismissed, the Commander reporting his Guard to the Adjutant or Orderly Officer.

xi. A Bugler should always mount and remain with the Quarter or Main Guard.

5. *Compliments.*—

i. Guards, Present Arms to:

(a) The Sovereign.

(b) Members of the Royal Family.

(c) Viceroy.

(d) The Governor and General Officers in uniform.

(e) Field Officer of the day when visited by him.

(f) A Regimental Guard to its C.O. once by day when in uniform.

(g) To all Armed Corps.

ii. Guards, Slope Arms to:

(a) All Armed Parties.

(b) Visiting Round when visited by him.

iii. Sentry, will Present Arms:

(a) At all times when his Guard presents.

(b) To all Armed Parties.

(c) To all Field Officers.

6. *An Armed Corps* is:—

i. A Regiment of Cavalry.

ii. A Battery of Horse or Field Artillery with its guns.

iii. Two Companies of Garrison Artillery.

iv. Four Companies of Engineers.

v. A Battalion of Infantry.

7. *An Armed Party* is any party armed with swords or rifles, and mounted or unmounted in the case of a mounted unit.

8. *Guards Turn Out.*—

i. The stated occasions for Guards to turn out are, at the commencement of Reveille, Retreat and Tattoo sounding.

They will then be inspected by the Guard Commander.

ii. Guards will also turn out under arms when a fire breaks out or an alarm is raised.

9. *Grand Rounds.*—Grand Rounds is when the Guard is visited by the Field Officer of the Day.

10. *Visiting Rounds.*—Visiting Rounds is when the Guard is visited by the Captain or Subaltern of the Day.

11. *Tour of Duty.*—A Guard, Escort, Picquet or Fatigue Party is entitled to count a tour of duty when it has been marched off the Parade Ground to commence its duty.

12. *Saluting.*—

i. Instructors will at all times impress upon recruits the importance of saluting.

ii. Soldiers are responsible for paying the proper compliments to all Officers at all times whether they are in uniform or plain clothes.

iii. It is also important to impress upon the men that the Salute is not a servile act and does not carry with it the stigma of slavery or servitude. The Salute is the military method of greeting a superior.

iv. Traditionally, the Salute has been brought down through the ages from the earliest history of Gentlemen and Men-at-Arms, varying somewhat in its forms in various periods; at the present time it is perpetuated in civilian life by the hand-shake, a token of greeting and friendship.

v. The Military Salute is made by raising the right hand to the head-dress and is a token of greeting indicative of an inward feeling of discipline and respect within the unit towards the superior officer whose military position charges him with certain responsibilities to the Crown. The smartness with which Salutes are given and returned reflects to a great extent this inward feeling of discipline and esprit de corps.

vi. Commissioned Officers are saluted by W.Os., N.C.Os. and other ranks when and wherever met.

vii. Field Officers are saluted by Captains and all junior ranks when and wherever met.

viii. Captains are saluted by Subalterns only on their first meeting of each day and on saying "Good-Night." These are

also the only occasions when it is customary for a Subaltern to "Sir" a Captain, except on parade. Captains and Subalterns must always "Sir" a Field Officer.

ix. If an Officer has occasion to address a Senior Officer on parade or duty, he will "Sir" and salute him, even if they are both of equal rank.

9. Duties of Regimental Officers, W.Os. and N.C.Os.

1. *The Commanding Officer.*—

i. The Commanding Officer is responsible for the training, discipline and interior economy of the unit both in the field and in quarters.

ii. He is responsible for the custody of the Regimental Records of Officers, Warrant Officers, N.C.Os. and Men.

iii. For appointments and promotions of N.C.Os.

iv. That Canteens and Regimental Institutes are conducted in accordance with the provisions of K.R. Can.

K.R. Can. 34 et seq.

2. *An Officer in Temporary Command.*—

i. An Officer in temporary command may not, on his own authority, issue any new Standing Orders nor amend existing ones.

ii. He may not issue orders, other than Routine Orders, nor grant leave or furlough which would take effect after the period of his temporary command.

iii. He may not appoint or promote Non-Commissioned Officers, but may grant acting rank and temporary appointments where necessary.

K.R. Can. 42.

3. *The Second-in-Command.*—

i. The Second-in-Command will assist the Commanding Officer in the military instruction of junior officers, in the maintenance of discipline and in matters of administration generally. He is especially charged with the interior economy of his unit.

ii. He will be President of the Regimental Institutes and, as such, will be responsible for the management and accounting of the Regimental Institutes, the Serjeants' Mess and the Regimental Workshops.

iii. He will supervise the messing throughout his unit and will audit all accounts therefor.

iv. He will exercise a general supervision over the weapon training of the Companies. He will directly supervise the weapon training of recruits and the Revolver Courses for Officers. He will conduct the judging distance and range-finding tests throughout the unit.

v. He will at all times give younger officers the benefit of his advice and encourage them to seek it. He will see that they acquire a thorough knowledge of their duties and that they are correct and regimental in their conduct and dress.

K.R. Can. 50 et seq.

4. *The Adjutant.*—

i. The Adjutant is a staff officer to the Commanding Officer, in whose name and by whose authority he performs all duties and issues all orders. He must set an example of loyalty, exact obedience, punctuality and correctness of dress. He is charged with the discipline, smartness and dress of all ranks, and with the supervision of the daily routine. It is his special duty to bring to the notice of the Commanding Officer any matter which may affect the efficiency, esprit de corps or prestige of the unit.

ii. The Orderly Room is his immediate province and he is responsible for its organization and efficiency. He has charge of the regimental books and records and will see that they are properly kept. He is also responsible for the correctness of all regimental returns compiled in the Orderly Room.

iii. Not only are all orders issued through him, but it is his duty to see that they are strictly and loyally obeyed.

iv. All official reports and communications to the Commanding Officer are to be made through him.

v. He will prepare the Charge Sheets and Summaries of Evidence in the cases of all soldiers remanded for trial by Court-Martial. He is responsible that witnesses are duly warned to attend Courts-Martial, and, when available, will act as Prosecutor.

vi. On arrival at a new station he will immediately acquaint himself with all local orders.

vii. He will personally keep the Officers' Duty Roster, and will supervise the Duty Roster of the Non-Commissioned Officers by means of frequent inspection. He will see that all persons are properly warned for their respective duties.

viii. He is responsible for the regulation of all duties. He will parade and inspect all guards, and all armed parties and detachments not commanded by an officer. On inspecting

the details for duty he will personally select the men required as Orderlies.

ix. He will frequently inspect the orders for Guards, Sentries, Police, Fire Duties, etc., to ensure that they are clearly written and renewed when necessary. He will frequently check the Gate Lists and Canteen Lists by the Orderly Serjeant's books.

x. He will ensure that the duties of the Quarter Guard, Picquets and police are properly carried out, and will occasionally visit the Guard Room and cells.

xi. He will see that the Colours, when off parade, are placed in the Officers' Mess when in barracks, and in charge of the Quarter Guard when in camp. He will personally detail the Colour Party when required.

xii. He will not on any account make or permit any alteration whatever in the modes of discipline and drill established in the unit.

xiii. He will acquaint himself with the disposition and character of each Officer, Warrant Officer and Non-Commissioned Officer and will immediately report to the Commanding Officer any slackness or neglect of duty.

xiv. He will exercise a close personal supervision over the dress and training of recruits.

xv. He will have charge of the Regimental Police and the Drummers. He will inspect their equipment and instruments at least once quarterly, and, if they are quartered separately from companies he will be responsible for their barrack rooms, which he will frequently inspect.

xvi. The following are under the immediate orders of the Adjutant:—

The Regimental Serjeant-Major.
The Provost Serjeant or Corporal.
The Drill Instructors.
The Serjeant Drummer.
The Orderly Room Clerks.

K.R. Can. 58.

5. *The Signalling Officer.*—The Signalling Officer is responsible for:—

i. The discipline of his Section.

ii. The quarters occupied by his Section.

iii. The completeness, serviceability and care of all technical equipment on his charge.

iv. The training of his Section and all Officers and other ranks selected to undergo signalling instruction.

v. The special training of promising signallers with a view to their becoming instructors.

6. *The Quartermaster.*—

i. The Quartermaster is a staff officer to the Commanding Officer, to whom he is responsible for all matters concerning Arming, Equipping, Clothing, Feeding, Quartering, and Transportation.

ii. He is responsible for the correctness of the Equipment, Barrack Stores and Clothing Ledgers, and of all indents, vouchers, returns and correspondence connected with his department.

iii. He will see that all personal equipment, clothing and necessities are correctly and clearly marked with the regimental number of the soldier to whom they are to be issued before they are removed from his stores.

iv. He is charged with the general supervision of barracks and camps. With respect to the former he is responsible for their heating, lighting, sanitation and cleanliness, and for their general maintenance and prompt repair; and with respect to the latter, that adequate accommodation and water supply are provided, and that the lines are kept clean, sanitary and free from obstruction.

v. Under the instructions of the Commanding Officer he will arrange the allotment of the married quarters. He will acquaint himself with the circumstances of all married soldiers and their dependents, and will keep the Commanding Officer informed of any matters concerning them which call for notice.

vi. He will conduct an inspection of barracks monthly, noting all damages and deficiencies and the particular rooms where these have occurred. He will render lists of these damages to the Officers Commanding Companies, in order that they may charge the individual concerned.

vii. He is responsible for the general proficiency of the Cooks, and for the proper equipment, and cleanliness of Cook-houses. He will assist the Second-in-Command in the supervision of messing throughout the Unit.

viii. He is responsible for the satisfactory conduct of the Regimental Workshops.

He is responsible for the efficiency, housing and maintenance of all fire apparatus.

ix. He is responsible for the adequacy and efficiency of all transport arrangements in connection with marches or other moves of his unit.

x. On the march he will precede his unit, accompanied by the Pioneers and such Working Party as may be necessary, and after selecting suitable ground will lay out the camp and prepare the necessary facilities for watering and sanitation.

K.R. Can. 64.

7. *Officers Commanding Companies.*—

i. The Company Commander is directly responsible to the Commanding Officer for the entire training and administration of his Company. His own activities will be chiefly directed to the training of the Company, while its administration will be delegated to the Company Second-in-Command.

ii. He will pay the greatest attention to the conduct and merits of every Non-Commissioned Officer and man in his Company, and will make himself acquainted with the character, disposition, and aptitude of each. Should he consider that a Non-Commissioned Officer is especially deserving of promotion, irrespective of seniority, he will invariably bring the case to the notice of the Commanding Officer.

iii. Recommendations for appointments, promotions, transfers and employments will be made by the soldier's Company Commander who will personally present the man's Conduct Sheet, and any other necessary information concerning him, to be considered by the Commanding Officer in connection with such recommendation.

iv. The Company Commander is responsible for the custody of the Company Conduct Sheets and of the Employment Sheets relative to the Non-Commissioned Officers and men of his Company, and for the completeness and accuracy of all entries therein. Whenever a Conduct Sheet or Employment Sheet is missing, he will report the fact, with a statement of the circumstances, to the Adjutant.

v. The Company Commander will attend the Orderly Room with the Company Conduct Sheets when charges against soldiers of his Company are to be investigated by the Commanding Officer. The Subaltern of the Platoon to which each accused soldier belongs will also attend.

vi. The names of all soldiers for disposal by the Commanding Officer, and those parading for interview, must reach the Regtl. Serjeant-Major at least one hour before Orderly Room Parade, and Company Commanders will conduct their own investigations accordingly. They will deal with all offences of a minor character (garrison charges excepted) which they consider their own power enables them to punish adequately. Their disposal of such charges will be recorded by Company Commanders on the Individual Crime Report (M.F.B.264.) which will be forwarded to the Orderly Room one hour before Orderly Room parade. Extracts from the Crime Reports of Companies will be entered in the Regimental Minor Offence Report (M.F.B.224.) which will be submitted to the Commanding Officer for his revision or approval of the awards. The crime reports will then be returned to their respective Companies by the Adjutant, who will note on them the Commanding Officers' revision or approval, and on receipt thereof, Company Commanders will enter the awards, as revised or approved, in the Company Conduct Sheets.

vii. The Company Commander is responsible for the sanitation of all barrack rooms and other buildings and of camp lines allotted to his Company. He is responsible at all times that boots and socks are clean and in good order, and at manoeuvres or on the line of march, that the men's feet are inspected daily by an officer. In every case of a serious irritation of the feet he will see that the soldier obtains immediate medical attention.

viii. He will frequently visit the sick of his Company.

ix. When a soldier is summoned to answer a charge before a Civil Court, the Company Commander (unless the Court is at a distance from the barracks or camp) will either attend himself or direct an Officer of his Company to do so. When the punishment is a fine, the officer will arrange the payment thereof. He will be accompanied, when necessary, by a Non-Commissioned Officer to escort the soldier on his return to Barracks or Camp.

x. He is responsible that all arrangements are properly made for the funeral of a deceased soldier of his Company. An Officer from the Company will attend the funeral, or should no Officer be available, he will inform the Adjutant, in order that one may be detailed from another Company. He will write to the next-of-kin, giving full particulars regarding the death of the soldier.

xi. He is responsible that all unexpended ball ammunition is collected after firing. Before blank ammunition is issued an

Officer will examine the pouches of each Platoon to ascertain that they contain no ball cartridges, and a report to this effect will be made to the Officer Commanding the parade before marching off. He will ensure that every man takes his pull-through, oil bottle and flannelette on parade whenever blank ammunition is to be fired.

xii. He will have every rifle in the Company inspected annually by an armourer before the commencement of the weapon training season.

xiii. He will encourage his men to seek his advice and assistance in all matters. He will give the fullest consideration to every complaint, and, if justified, will take every means to ensure its prompt redress.

xiv. When a Company is handed over from one Officer to another, for any period exceeding one week, a certificate will be rendered to the Commanding Officer by the Officer taking over.

xv. Company Commanders are not authorized to take Non-Commissioned Officers and men regimentally employed for any parades or duties without the permission of the Adjutant.

xvi. The Company Commander is responsible that the Barrack Rooms and other premises occupied by his Company, are visited daily, except Sundays, by an Officer.

K.R. Can. 52 et seq.

8. *Seconds-in-Command of Companies.*—

i. The Company Second-in-Command is responsible to the Company Commander for its administration generally.

ii. He is responsible that the equipment, clothing and necessities of every man are always ready for service and clearly marked with the man's number.

iii. He will arrange for the fitting of new issues of clothing and boots, and, on these occasions, will invariably be present, accompanied by the Platoon Commander concerned.

iv. He is responsible that all arms on charge to the Company are at all times in good condition, and will accordingly enforce a thorough system of care of arms throughout the Company. He will arrange that the arms of all employed men are inspected at least once a week by an Officer.

v. He will see that the recruits are clothed sufficiently to be paraded for drill, not later than the third day after being posted.

vi. He will inspect the kits of the Non-Commissioned Officers, below the rank of serjeant, and men, at least once a month and

will have all missing articles immediately replaced. He will arrange the dates of his inspections with the Company Commander and will report to him at the conclusion the result of each inspection.

vii. He will frequently inspect the Company Duty Rosters to see that they are properly and fairly kept.

viii. He is responsible that Regimental and Company Orders are regularly posted on the Company Notice Board and that Standing Orders, Fire Orders, Scale of Fines for Drunkenness, and other Standing Orders, are posted in the Company quarters and maintained in good condition.

ix. After arrival in Camp he will personally see that all Company Baggage has been unloaded and tents properly pitched, and on leaving camp that all Company Baggage has been loaded and lines cleared before leaving the Company lines. He will personally so report to the Company Commander.

x. When Messing is under Company arrangements he is responsible for the Messing of his Company. He will prepare and sign the weekly diet sheet in triplicate, one copy to be posted in the Cook-house, another in the Mess Room and the third to be sent to the Orderly Room.

9. Subaltern Officers.—

i. Subaltern Officers will at all times address their seniors with marked respect.

ii. They will not only assume complete responsibility for everything concerning their respective Platoons but will generally assist the Company Commander in all matters affecting the Company and will bring to his notice any irregularities and suggested improvements.

iii. Subaltern Officers may at any time be called upon to act as Company Seconds-in-Command or as Company Commanders. They will, therefore, make themselves thoroughly acquainted with the duties of those Officers and with the Standing Orders relating to them.

iv. All Officers on joining will undergo a course of drill until the Commanding Officer is satisfied that they are qualified therein and orders their dismissal to duty.

v. Officers of less than one year's service will attend Orderly Room Parade daily for instruction.

vi. Subaltern Officers of each Company, under the orders of their Company Commander, will visit daily the men's barrack

rooms, and will see that each man's bedding, equipment, clothing, etc., are arranged in accordance with the regimental custom, and that the rooms and their furniture are clean. Irregularities will be checked, and those of a serious nature will be reported to the Company Second-in-Command.

vii. When in the supernumerary rank on parade they are in a position to observe the rank and file. In this position it is their duty to correct and prevent slovenly marching, careless dressing and all other irregularities.

viii. Before applying for leave of absence a Subaltern Officer must obtain the sanction of his Company Commander.

K.R. Can. 59 et seq.

10. Captain of the Day (or Week).—

i. His duties commence and end at "Reveille."

ii. When performing his duties he will wear a sword (except on active service).

iii. He is responsible for the general cleanliness of the Camp, Quarters or Billets.

iv. He will inspect the meals of the Battalion and will ascertain if the men have any complaints, and adjust same when found.

v. He will visit the Regimental Guards and Sentries, once by day, and once by night—not before the hour of 10.30 p.m. He will see that the Sentries are well acquainted with their orders.

vi. He will obtain a form of report from the Orderly Room (MFB. 236) and will forward it completed to the Adjutant by 9.00 a.m. on the morning he comes off duty. In it he will report any irregularities which he considers should be brought to the notice of the Commanding Officer. He will forward with his own report that of the Subaltern of the Day, which he will initial if correct.

vii. During his tour of duty he will be in uniform, and will not leave the Camp or Barracks, except on duty, without permission.

11. Subaltern of the Day (or Orderly Officer).—

i. His duties will commence and end at "Reveille".

ii. When performing his duties he will wear a sword (except on active service).

iii. He will assist the Captain of the Day, to whom he will report himself when coming on duty.

iv. In the absence of the Adjutant, he will inspect and march off the Regimental Guard at the appointed hour.

v. He will visit the Regimental Guards and Sentries once by day and once by night, and one hour must elapse between his visit and that of the Captain of the Day. He will see that the Sentries are alert and well acquainted with their orders.

vi. He will attend the Staff Parade at Last Post and collect reports.

vii. He will obtain an Orderly Officer's Report, (MFB. 236) from the Orderly Room, and carry out the duties laid down therein, and will forward it by the Battalion Orderly Serjeant to the Captain of the Day by 8.30 a.m. on the morning he comes off duty. In it he will report any irregularities which may have been brought to his notice during his tour of duty.

viii. During his tour of duty he will always appear in uniform, and will not leave the Barracks, Camp or Billets without the permission of the Adjutant.

12. *Regimental Serjeant-Major.*—

i. The R.S.M. is the senior warrant officer of his Regiment. He is directly charged with the discipline of the Non-Commissioned Officers and with the supervision of their duties. On his knowledge, personality and influence the efficiency of the Non-Commissioned Officers and consequently of the Battalion, largely depends.

ii. He must be an expert in Drill, and must have a perfect knowledge of the Standing Orders and regimental customs of his Regt., and of the duties of every individual.

iii. He must carefully observe the conduct and character of all Non-Commissioned Officers, and the spirit and manner in which they perform their duties. He will take every opportunity of assisting them with his advice and will encourage them to seek it. He will give special care to the training of Lance-Corporals on first appointment.

iv. He will personally keep the Duty Roster of the Non-Commissioned Officers and will be responsible for its correctness and fairness.

v. Under the orders of the Adjutant, and as his assistant, he will constantly and closely supervise the instruction of recruits.

vi. He is ex-officio President of the Serjeants' Mess and it is his duty to see that it is conducted strictly in accordance with the King's Regulations and the Regimental Rules for Serjeants' Messes. He will check undesirable discussions and any tendency to conduct which is not creditable to the Mess and to

the Regiment. He will immediately report any irregularities to the Adjutant.

vii. He will invariably bring to the notice of the Adjutant any special aptitude, valuable initiative and special instances of excellent performance of duty, and any neglect, slackness or irregularity, on the part of the Non-Commissioned Officers.

13. *Regimental Quartermaster-Serjeant.*—

i. The R.Q.M.S. is the immediate assistant of the Quartermaster in all his various duties.

ii. He should be present at the issue of all battalion stores, rations, fuel and ammunition.

iii. He will attend to the daily cleaning of Barracks or Camp grounds.

iv. He will visit the Cook-houses, Latrines, Incinerators and Refuse Pits daily, reporting any irregularity to the Quartermaster.

v. He will attend all Barrack or Camp inspections.

vi. He has charge of the Camp equipment, the baggage and ammunition, together with the superintendence of the loading and conveyance of such when on the line of march.

14. *Company Serjeant-Major.*—

i. This Warrant Officer is in close touch with the Company Commander and should be an example, possessed of tact, good temper, reliable, active and thoroughly competent for the many duties which devolve upon him.

ii. He should be held responsible for the discipline, bearing, dress and smartness of those of his Company, the condition of their arms, rooms or tents, for keeping the Roll of the Company, the state, and for supervising the Duty Roster.

15. *Company Quartermaster-Serjeant.*— In the selection of this Non-Commissioned Officer an aptitude for figures and method should be considered, as his duty lies in the receipt, issue and charge of arms, equipment, clothing, necessaries and rations, the supervision of barrack equipment and bedding, rooms and passages of his Company, the distribution of its washing and is pay accounts, duties which entail the keeping of many accounts and books, and constant supervision.

16. *Orderly Room Clerks.*—

i. The Orderly Room Clerks are directly under the orders of the Adjutant. They occupy a position of much responsibility

and trust and are required to preserve the strictest secrecy regarding all official communications coming under their observation.

ii. The Senior Orderly Room Clerk is responsible to the Adjutant:—

- (a) For the discipline and efficiency of the junior clerks and for the allotment of duties to them.
- (b) For the form and correctness of all correspondence, returns, etc., made out in the Orderly Room.
- (c) For the preservation and appropriate filing of all correspondence entering and leaving the office.
- (d) That no person has access to any book or document in his charge without an order from the Commanding Officer or Adjutant.
- (e) That all stationery is used economically.
- (f) That the Orderly Room offices are at all times clean and in good order.
- (g) That at least one clerk is always present in the Orderly Room during office hours.

17. *Stretcher-Bearer Serjeant*.— This N.C.O. should exercise immediate supervision of the stretcher bearers reporting to the Medical Officer, and possess a competent knowledge of stretcher drill and first aid.

18. *Battalion Orderly Serjeant*.—

- i. His duties commence and end at "Reveille."
- ii. He will attend the Officers of the Day in all their duties.
- iii. He will collect "Absentee Reports" half an hour after Reveille.
- iv. He will parade the Coy. Orderly Corporals at the issue of rations, also when the first bugle for meals sounds.
- v. He will see that the meals for men on Guard, in the Detention Room or in Hospital are forwarded.
- vi. He will parade the men reporting sick at the appointed hour and march them to the Medical Room or Tent.
- vii. On the bugle sounding for Orderly Serjeants, he will parade with them.
- viii. He will parade and call the roll of those attending school and march them to the school.
- ix. He will parade the Inlying Picquet at "Retreat" and "Tattoo" (Last Post).

x. He will parade the duties at Tattoo, collect the Absentee and Pass Reports, and forward them to the Guard Room.

xi. He will be assisted in his work by the Battalion Orderly Corporal to whom he will issue such orders as required.

xii. On the day he comes off duty, he will call, before 8.30 a.m., for the Subaltern of the Day's Report and will take it to the Captain of the Day.

xiii. He will obtain a form of report from the Orderly Room, and hand it to be checked and initialled, to the Subaltern of the Day, when coming off duty.

xiv. During his tour of duty he will wear belt and side-arms and will carry a regimental stick. He will not leave Camp or Barracks, except on duty, and during such absence, the Battalion Orderly Corporal will answer for him.

19. *Battalion Orderly Corporal*.—

- i. His duties commence and end at "Reveille."
- ii. He will assist the Battalion Orderly Serjeant from whom he will receive such orders and detail as is necessary.
- iii. During his tour of duty he will wear a belt and side-arms and will carry a regimental stick.
- iv. He will not leave Camp or Barracks, except on duty.

20. *Company Orderly Serjeant*.—

- i. His tour of duty will usually last one week.
- ii. Immediately Reveille is sounded he will call the roll and see that all men of his Company get out of bed and dress.
- iii. He is responsible for the general cleanliness of the Company lines.
- iv. He will parade promptly on every occasion on which the bugle sounds for Orderly Serjeants.
- v. He will parade and inspect the men of his Company for Guard at the appointed hour.
- vi. He will attend all parades and roll calls, call the rolls and report any absentees.
- vii. When the bugle sounds for Orders he will attend at the Orderly Room. He is responsible that all orders issued are communicated to all concerned without delay. He should have in his possession a copy of his Company Parade State, and nominal roll of his Company showing how they are employed.
- viii. He will make out the detail of parades and duties, and place it on the Company Notice Board.

ix. At First Post, assisted by the Company Orderly Corporal, he will call the roll of his Company, and at Last Post will attend Staff Parade, and report to the Battalion Serjeant-Major or Battalion Orderly Serjeant, that the men of his Company are present or otherwise.

x. On the bugle sounding "Lights Out," he will see that all unauthorized lights are extinguished.

xi. He will make out a daily state of the Company and hand it in to Coy. Office one hour after Reveille.

xii. He will not change his duty without the authority of the Company Commander.

xiii. During his tour of duty, he will remain constantly about the Company, and will not leave Camp, Barracks or Billets, except on duty.

xiv. His handing over of duties will be carried out in the presence of the Company Serjeant-Major, who will see that the Duty Roster and other books are up to date.

21. *Company Orderly Corporal.*—

i. His tour of duty will usually last for one week.

ii. He will assist the Orderly Serjeant in his duties.

iii. He will take the names of men reporting sick, march the sick to the appointed place and hand the sick reports to the Battalion Orderly Serjeant.

iv. He will parade the Mess Orderlies on Cook-house sounding, also for the issue of rations, handing same over to the Serjeant Cook.

v. He will receive mail from the Mail Orderly and issue same without delay.

vi. He should carry a roll of his Company, showing the distribution of messes.

vii. During his tour of duty he will remain constantly about the Company lines and will not leave Camp, Barracks or Billets, except on duty, and he will then inform the Orderly Serjeant as to his hour of departure and return.

22. *N.C.O. on Canteen Duty.*—

i. He is responsible for the discipline and conduct in the Canteen.

ii. Responsible for the opening and closing of the Canteen at the proper hours.

iii. Responsible that unauthorized persons are not allowed in the Canteen.

iv. Responsible that soldiers whose names are on the Canteen List are not allowed in Canteen, except at authorized hours.

v. He will attend Staff Parade at 10.00 p.m.

23. *The Serjeant-Cook.*—

i. The Serjeant-Cook is responsible to the Quartermaster for the training and efficiency of the Cooks, for the personal supervision of the cooking and Cook-houses, for the care and cleanliness of the utensils and for the economical use of all rations throughout the Battalion.

ii. He will assist the messing committees with his advice and will aid them in varying the diet as much as possible.

iii. He will accompany the Orderly Officer on his inspection of the Cook-houses.

24. *The Serjeant Tailor.*—

i. The Serjeant Tailor is responsible to the Quartermaster for all necessary alterations and repairs of clothing issued to warrant officers, non-commissioned officers and men. He will invariably give precedence to such work as is required to enable soldiers to attend parades and duties properly dressed.

ii. He is not permitted to make or alter any article of uniform clothing otherwise than in strict conformity with the regulations.

25. *Signalling Serjeant.*— This N.C.O. will assist the Signalling Officer in his special work, paying particular attention to care of arms, equipment and clothing and the discipline of the section.

26. *Pioneer Serjeant.*— This N.C.O. is in charge of the Pioneers, and should be, if possible, a carpenter by trade. He should have a thorough knowledge of his own, as well as a general knowledge of other trades.

27. *Transport Serjeant.*— To this N.C.O. is entrusted the care of the animals, harness, and vehicles of the Regiment, as well as the supervision of the men detailed for duty in connection therewith.

10. Official Books, Etc., and Correspondence

1. *Official Books, Etc.*— Officers require a general knowledge of the contents of the principal official books, regulations, etc.

in order that they may know where to look for detailed information on any military subject. Some of the more important are:—

i. *Militia Act*.—This is an Act of Parliament passed by the Dominion Parliament. It lays down the law under which the Militia exists. Its provisions can only be altered by a further Act of Parliament.

ii. *General Orders*.—All General Orders are approved by the Governor General-in-Council, *i.e.*, are Orders-in-Council and are made under the authority of some Act of Parliament. They can only be altered by a further Order-in-Council.

iii. *Militia Orders*.—These are the orders of National Defence Headquarters giving detailed instructions regarding the application of the provisions of the Militia Act and General Orders. They are also used as a means of promulgating information and instructions generally to the Militia. They can be amended by a further Militia Order.

iv. *The Army Act*.—This is an Act of the British Parliament and it contains sections relating to discipline, enlistment, terms of service, extension and prolongation of service, re-engagement, transfer, discharge, billeting and impressment of carriages. It is made applicable to the Canadian land forces by the Militia Act. The A.A. is given in the M.M.L. and quoted: A.A. Sec. 24 (3).

v. *Army and Air Force (Annual) Act*.—This is the means of continuing the A.A. in force from year to year. It also fixes the price for Billets, etc., for the coming year, and makes any necessary amendments to the A.A. Applies to British Army only.

vi. *Army Orders*.—Correspond in Great Britain to General Orders in Canada.

vii. *Army Council Instructions*.—Correspond to Militia Orders.

viii. *Rules of Procedure*.—These deal with all matters concerning the convening and procedure of Courts-Martial, Courts of Inquiry, etc. They are made under authority of A.A. Sec. 70, and are given in the M.M.L. They are quoted thus: R.P. 124 (D). Made applicable to the Canadian land forces by the Militia Act.

ix. *Pay and Allowance Regulations*.—These govern the pay and allowances of the Militia. They are made under authority of the Militia Act and the individual regulations are known as Articles. They are quoted thus: P. & A. Regs. Art. 88 (4) (a).

x. *King's Regulations and Orders for the Canadian Militia*. This is a Canadian publication. It deals with questions of command, rank, discipline, duties, interior economy, military training and education, movements by land and sea, extension of service, re-engagements, transfer, discharge, leave and furlough, dress, correspondence, regimental books, etc. The book is divided into sections, and numbered paras. which are referred to thus: K.R. Can. 242.

xi. *King's Regulations for the Army and Army Reserve*. This is similar in form to K.R. Can. and is referred to thus: K.R. Army 72.

xii. *Equipment Regulations*.—These detail the exact equipment for the different arms of the service both in peace and war.

xiii. *Dress Regulations*.—Give details of dress for Officers.

xiv. *Clothing Regulations*.—Give details of dress for other ranks and the rules for the issue of clothing and necessaries.

xv. *Mobilization Regulations*.—Contain instructions as to the arrangements and procedure for mobilizing.

xvi. *Field Service Manual*.—One is issued for each unit and contains detailed tables as to the Unit's establishment, transport, ammunition, exact stores and load carried on each vehicle or animal and how to be packed.

xvii. *Manual of Military Law*.

xviii. *Field Service Pocket Book*.—Contains in compact form information on military subjects which would be of use on active service.

xix. *Field Service Regulations, Vol. 1*—Lays down the principles upon which an Army in the Field is organized and administered: Vols. II and III the principles upon which operations in the field are to be conducted.

xx. Cavalry Training
Artillery Training
Engineer Training
Signal Training
Infantry Training
Tank and A.C. Training
R.A.S.C. Training
M.E.D. Training

} Contain detailed instructions for the training of the respective arms.

xxi. *Training Regulations*.—Give general principles of training, rules for staff tours, war games, etc., and regulations for conduct of manoeuvres.

xxii. *War Establishments*.—These contain all details of strength by ranks of each unit and also details of animals and vehicles, amount of ammunition allowed for each unit and rations carried for men and horses.

xxiii. *Manual of Map Reading and Field Sketching*.

xxiv. *Manual of Field Engineering, Vol. 1, 1933 (All Arms)* — Gives details of field works which arms other than engineers require to know.

xxv. *Manual of Hygiene*.

xxvi. *Manual of Smoke*.

xxvii. *Manual of Movement* gives details of duties of movement staff.

xxviii. *Defence Against Gas*.

xxix. *Infantry Section Leading and Cavalry Section Leading*.—Guide to training of leaders of sections in war.

xxx. *Small Arms Training* lays down system of training in small arms.

xxxi. *Modern Formations 1931*, outlines the extent to which the various arms of the service have been affected by mechanization and is a guide for the preparation of exercises dealing with armoured and mechanized formations.

xxxii. *Manual of Elementary Drill (All arms) 1935*.

xxxiii. *Manual of Ceremonial, 1935*.

2. *District Orders*.—These orders of the District Officer Commanding are divided into:—

- i. General Staff Orders.
- ii. Administrative Staff Orders.

3. *Regimental or Unit Orders*.—Issued daily and divided into two parts.

- i. *Part I* will deal with training, manoeuvres, parades, and matters which do not affect a soldier's pay, service or documents.
- ii. *Part II* will deal with matters which affect a soldier's pay, services, or documents.

4. *Standing Orders*.—The Standing Orders of a Regiment deal with matters affecting the Regiment which are seldom subject to change. Such orders are issued subject to the provisions of K.R. Can., and their purpose should only be to supplement K.R. Can. in matters pertaining especially to their own Regiment.

5. *Officers' Orders*.—Orders affecting Officers only are conveyed to them by the Adjutant in a "Memo"; Officers must initial this memo as proof of their having read the order.

6. *Correspondence*.—

i. The regulations regarding correspondence are laid down in K.R. Can. 1450-1478.

ii. Essential points in military correspondence are promptness, conciseness, clearness of expression and completeness.

iii. Only one subject is to be dealt with in a letter.

iv. Always leave a quarter-page margin to the left and indicate subject of letter in the margin.

v. Number all paragraphs.

vi. Correspondence is invariably signed by an Officer. Rubber signature stamps forbidden. Signature always followed by rank and unit or appointment.

vii. The form given in K.R. Can. 1539 has fallen into disuse, except for very formal letters.

viii. Ordinary official correspondence is conducted in the following form:

File Number
Place and Date.

Headquarters,
Military District No. 1,
London, Ont.

Annual Training
1928-29

(a) Reference your L 1-2 of the 11th Feb., re the marginally noted subject, etc.

(b) Etc.

A. Blank, Lt.-Col.,
Comdg. The Huron Regiment.

ix. Always address person concerned by his appointment and NOT by name, unless letter is one for his personal attention in his personal capacity.

x. Letters for National Defence Headquarters are addressed through The Secretary, Department of National Defence, Ottawa.

xi. Letters to a District should be addressed "Headquarters, Military District No. 1, London, Ont., attention G.S.O. or the staff officer concerned — the envelope being addressed merely to District Headquarters."

xii. Letters for Heads of Services or departments, on subjects of a departmental nature, may be addressed to them directly.

xiii. Secret or Confidential correspondence shall be marked "Secret" or "Confidential" in red ink on top of first sheet. It shall be transmitted in two covers. The outer envelope addressed as usual and the inner marked "Secret" or "Confidential." It is customary to address the inner envelope to the Officer concerned, sometimes by name.

11. Badges of Rank

1. *Ranks and Appointments.*— The ranks and appointments held by soldiers of the Canadian Militia are shown in the following table, and the grant, under due authority of any appointment therein detailed will confer on the holder the rank specified opposite that appointment in the table and the authority to wear the badges of rank as authorized for such rank or appointment in the Regulations and Instructions for Clothing. K.R. Can. para. 308.

WARRANT OFFICERS

Class I.—

- (1) Conductor, R.C.O.C.
Master-Gunner, 1st Class.
Staff Serjeant-Major, 1st Class.
- (2) Master-Gunner, 2nd Class.
- (3) Garrison Serjeant-Major.
- (4) Accountant Signals, Serjeant-Major.
Armament Serjeant-Major.
Armourer Serjeant-Major.
Artificer Serjeant-Major.
Bandmaster.
Clerk Signals, Serjeant-Major.
Draughtsman Signals, Serjeant-Major.
Engineer Accountant Serjeant-Major.
Engineer Clerk Serjeant-Major.
Engineer Draughtsman Serjeant-Major.
Farrier Serjeant-Major.
Foreman of Signals, Serjeant-Major.

Foreman of Works Serjeant-Major.
Lithographer Serjeant-Major.
Mechanist Serjeant-Major.
Regimental Serjeant-Major.
Saddler Serjeant-Major.
Serjeant-Major.
Serjeant-Major, Artillery Clerk.
Serjeant-Major Instructor (Instructional Cadre).
Staff Serjeant-Major.
Sub-Conductor, R.C.O.C.
Superintending Clerk.
Topographic Surveyor Serjeant-Major.

Class II.—

- (1) Master-Gunner, 3rd Class.
Armament Quartermaster-Serjeant.
Engineer Clerk Quartermaster-Serjeant.
Engineer Draughtsman Quartermaster-Serjeant.
Farrier Quartermaster-Serjeant.
Foreman of Signals Quartermaster-Serjeant.
Foreman of Works Quartermaster-Serjeant.
Garrison Quartermaster-Serjeant.
Lithographer Quartermaster-Serjeant.
- (2) Mechanist Quartermaster-Serjeant.
Orderly-Room Serjeant (when graded as a Quartermaster-Serjeant).
Quartermaster-Serjeant.
Saddler Quartermaster-Serjeant.
Staff Quartermaster-Serjeant.
- (3) Topographic Surveyor Quartermaster-Serjeant.
Squadron, Battery or Company Serjeant-Major.
Squadron, Battery or Company Serjeant-Major (Instructional Cadre).

Class III.—

Troop Serjeant-Major.
Section Serjeant-Major.
Platoon Serjeant-Major.

NON-COMMISSIONED OFFICERS AND MEN

Squadron, Battery or Company Quartermaster-Serjeant.—

- (1) Foreman of Signals, Company Quartermaster-Serjeant.
Squadron, Battery or Company Quartermaster-Serjeant.

Staff-Serjeant.—

- (1) Armament Staff-Serjeant.
Armourer Staff-Serjeant.
Engineer Clerk Staff-Serjeant.
Engineer Draughtsman Staff-Serjeant.
Farrier Staff-Serjeant.
Foreman of Works Staff-Serjeant.
Lithographer Staff-Serjeant.
Mechanist Staff-Serjeant.
Orderly-Room Serjeant (when graded as a Staff-Serjeant).
Saddler Staff-Serjeant.
Staff-Serjeant Artillery Clerk.
Staff-Serjeant Clerk.
Topographic Surveyor Staff-Serjeant.

Serjeant.—

- (2) Armourer Serjeant.
Band Serjeant.
Bugle Major.
Clerk Signals Serjeant.
Drum-Major.
Engineer Clerk Serjeant.
Engineer Draughtsman Serjeant.
Engineer Works Serjeant.
Farrier-Serjeant.
Lithographer Serjeant.
Machinist Serjeant.
Mechanist Serjeant.
Orderly-Room Serjeant (when below the rank of Staff-Serjeant).
Pay-Serjeant.
Pioneer Serjeant.
Pipe-Major.
Provost Serjeant.
Saddler Serjeant.
Serjeant-Artificer.
Serjeant Artillery Clerk.
Serjeant-Cook.
Serjeant-Clerk.
Serjeant-Instructor (Instructional Cadre).
Serjeant-Roughrider.
Serjeant Shoemaker.
Serjeant Tailor.

Signalling Serjeant.
Transport Serjeant.
Topographic Surveyor Serjeant.
Trumpet-Major.
Wheeler-Serjeant.

Corporal, Bombardier.—

- (3) Armourer Corporal.
Artificer Corporal.
Band Bombardier.
Band Corporal.
Bombardier-Clerk.
Bombardier-Signaller (R.C.A.).
Bombardier Orderly-Room Clerk.
Bombardier-Cook.
Corporal-Cook.
Corporal-Clerk.
Corporal Orderly-Room Clerk.
Farrier Corporal.
Lance-Serjeant.
Provost Corporal.
Signalling Corporal.
Transport Corporal.

Trooper, Gunner, Sapper, Signallman, Driver, Private, Guardsman, Fusilier, Rifleman.—

- (4) Armament Private.
Armourer Lance-Corporal.
Armourer Private.
Artificer.
Bandsman.
Bugler.
Clerk.
Drummer.
Farrier.
Lance-Bombardier.
Lance-Corporal.
Musician.
Pioneer.
Piper.
Saddler.
Signaller (other than R.C.C.S.).
Trumpeter.
Wheeler.

Boy.—

(5) A boy holding any appointment.

2. *Badges of Rank.*—

RANK	BADGE OF RANK
Warrant Officer, Class I.....	Royal Coat-of-Arms.
Warrant Officer, Class II....	Crown surrounded by Laurel Wreath.
Warrant Officer, Class III....	Crown.
Staff Serjeant.....	3 Stripes with Crown above.
Serjeant.....	3 Stripes, with badge of appointment above, if any.
Corporal or Bombardier.....	2 Stripes.
Troopers, Sappers, Gunners, 1 Private.....	1 Stripe (if holding the appointment of Lance-Corporal or Lance-Bombardier).

12. Pay and Allowances

1. *General Provisions.*—

i. Officers and O.Rs. N.P.A.M., are entitled to the pay of their rank for the training season of their unit, subject to the "establishment for pay" set down for each unit in Militia Orders yearly.

ii. Training for which pay is issued may be carried out at local H.Q. or in camps of instruction.

iii. At local H.Q. for purposes of issuing pay, "drills" are reckoned as follows:

- Parade in forenoon or afternoon of two hours' duration one-half day (two therefore required for one day's pay).
- Practical tactical exercise and field training, at least five hours' duration — one day.
- Church parade, small arms training or inspection if at least two hours — one-half day.

iv. When in Camp, etc., the day is reckoned as one of twenty-four hours. In Camp each Officer and man is entitled to rations and shelter at public expense or allowances in lieu.

v. Officers and men travelling to and from Permanent Schools of Instruction which they are authorized to attend are entitled to transportation and subsistence en route.

vi. Officers and men, N.P.A.M., are entitled to the pay of their actual rank while attending a school of instruction other than a provisional school.

2. *Rates of Pay.* (Not applicable on active service).—

i. Officers:

2nd Lieutenant.....	\$3.00 per day
Lieutenant.....	3.60 per day
Captain.....	5.20 per day
Major.....	6.50 per day
Lieutenant-Colonel.....	7.70 per day

ii. N.C.Os. and O.Rs.

Boy.....	\$0.60 per day
Private.....	1.20 per day
Lance-Corporal.....	1.40 per day
Corporal.....	1.60 per day
Serjeant.....	1.90 per day
C.Q.M.S.....	2.20 per day
C.S.M. and other W.Os., Cl. II.....	2.80 per day
Regimental Serjeant-Major.....	3.70 per day
All other W.Os., Cl. I.....	3.40 per day

3. *Rates of Allowances.* (Not applicable on active service).—

i. In addition to pay set forth above the following allowances may be authorized when candidates are attending Schools of Instruction as laid down in Art. 258, P. and A. Regs., 1927:

Officers and soldiers attached for instruction, except those specially exempted will be members of the established Regimental Messes, and under the following circumstances the District Officer Commanding may authorize allowances as stated:

(a) If accommodation and messing facilities are available:

No allowance is issuable, excepting the allowance in lieu of Rations of 50 cents per diem if Rations are not issued in kind.

(b) If accommodation is available but no messing facilities exist:

Officers.....	\$1.05	} In lieu of subsistence.
Soldiers.....	0.85	

- (c) If no accommodation is available in barracks or other public buildings but messing facilities exist:

If Rations in kind are issued	If Rations in kind are not issued
----------------------------------	--------------------------------------

Officers.....	65c p.d.....	\$1.15 p.d.
Soldiers.....	35c p.d.....	0.85 p.d.

- (d) If neither accommodation nor messing facilities are available:

Officers.....	\$1.70	In lieu of quarters and subsistence.
Soldiers.....	1.20	

Note: When Schools are held in Camps, accommodation under canvas will be considered as accommodation in public quarters.

- ii. Allowances and subsistence en route to and from Schools — refer to P. and A. Regs., Arts. 256 et seq.

Note: The above is a general resumé on the subject as set forth in P. and A. Regs.

13. Passes

1. Absence from Barracks or Camp is given to soldiers in the form of a "Pass." In granting passes consideration should be given to the length of service, conduct and military efficiency of the soldier.

2. A Pass is limited to six days; for longer periods a "Furlough" is granted.

3. Passes are granted and signed by Company Commanders and their equivalent in other arms of the service.

4. Furloughs and Permanent Passes, e.g., a pass to soldiers of long service and good conduct to remain out of Barracks except when on duty, must be granted and signed by the Commanding Officer.

5. Regulations in regard to "Leave of Absence" and Furloughs for the Militia are found in K.R. Can. 1099-1143.

14. Soldier Servants

1. The employment of soldiers (when available) as Officers' servants and grooms is sanctioned as an indulgence.

2. Their pay as servant or groom is either \$3 or \$5 per month, depending on whether the Officer is married or single, and whether, in the case of grooms, there is one horse or two to be cared for.

3. Soldier-servants should be selected from those who have had at least 1 year's service. The duties that they must perform in addition to their servant's duties are laid down in the unit's Standing Orders.

4. Commanding Officers may permit Warrant Officers and certain N.C.Os. the use of a servant; he is called a "batman"; his pay is an appropriate rate laid down by the Commanding Officer. K.R. Can. 1155-1161.

15. Soldiers Generally

1. Soldiers should be distinguished from civilians by their smartness, cleanliness and sobriety, by their honesty and respect for authority, and by their cheerful readiness to carry on under difficulty. In short, their conduct at all times should be such as will honour the Regiment to which they have the honour to belong.

2. Every soldier is bound to render assistance to the civil or military police when called upon to do so and will remain with them until he is told that he is no longer required.

3. A soldier is not permitted to take part in any political demonstration, nor to join in any procession, whatever its object. He will at all times avoid quarrels or disputes with civilians.

4. A soldier is responsible for keeping his arms, equipment, clothing and necessaries at all times in serviceable condition; he will not lend, make away with, alter or deface any article or portion of them without the permission of the Officer Commanding his Company and he will be required to replace at his own expense any article which has become unserviceable or incorrect by his own action or neglect.

5. Soldiers will not waste or misuse their food. The habit of its careful use acquired in peace will be of the utmost value in war.

6. Soldiers will sit down to all meals in clean fatigue dress without caps.

7. When passing a funeral a soldier will salute the body.

8. While a soldier is not permitted in any way to question an order which he receives and has no choice at the time but to obey, he has the fullest and freest right of appeal to his Company Commander, and through him to his Commanding Officer, whenever he considers that he has suffered injustice or has other ground for complaint. No Warrant or Non-Commissioned Officer is permitted, on any consideration to

impede a soldier in the exercise of this right. A soldier is not subject to punishment on the ground of his complaint being frivolous nor on any other ground except that of wilful misstatement. The subject of any complaint made by a soldier must, however, relate solely to himself; he is not permitted to act as the leader or spokesman of others.

16. The Band

1. Neither the Band collectively, nor its members individually are permitted to accept private engagements without the sanction of the Commanding Officer.

2. On every occasion on which the Band is to play out of Barracks, it will be marched from and to the Barracks as a unit.

3. An Officer will be detailed as Band President, who will have general charge of the Band and of the Band fund. He will advise the Commanding Officer on all matters connected with the Band and will obtain the Commanding Officer's sanction for the purchase of any new instruments and for any other large or unusual expenditure.

4. The Band-Serjeant will keep an inventory of all the instruments in possession of the Band, on which will be noted, in the case of each instrument, the musician to whom it is in charge, the date of its receipt and the condition at last inspection. He will keep a list of all music in possession of the Band, both sheet music and cards. He will inspect the cards weekly and will be responsible for the replacement of those defaced or lost.

5. Each bandsman is responsible for the instrument or instruments in his charge, and will be required to make good any damage due to carelessness or neglect.

6. The Band President will inspect all instruments quarterly, and will, at the same time check their completeness and condition by the Band-Serjeant's inventory.

7. When the Band plays at the Officers' Mess or in public, no one but the Senior Regimental Officer present will give any orders to the Band.

8. No instrument will at any time be removed from the Band Room, except for duty, without the permission of the Band President.

17. Serjeants' Mess

1. All Regimental Warrant Officers and N.C.Os. of and above the rank of Serjeant are permanent members of the Mess, and single members must be dining members.

2. The Mess is under the immediate supervision of the President Regimental Institutes.

3. The R.S.M. is ex-officio President of the Mess. He is responsible to the C.O. that the rules of the Mess are strictly observed, that no discreditable or undesirable conduct is tolerated in the Mess, and that the Mess is conducted with regularity and economy.

4. A general meeting of the Mess, attended by all permanent members, should be held monthly. At each meeting the minutes of the previous meeting will be read by the Secretary, and the accounts of the previous month, with vouchers, must be submitted by the Treasurer for the information of all members. Minutes will be recorded by the Secretary and submitted on the following day to the C.O. for his approval.

5. The President will be assisted in the management of the Mess by a Committee consisting of a Treasurer and two members, one to act as Secretary. One member of the Committee should be a dining member.

6. The Secretary will record the minutes of all meetings of the Mess, and will be responsible for the conduct of correspondence and the custody of all documents. He will be responsible for the appearance and behaviour of the waiters. He will generally assist the President in all matters other than financial, connected with the management of the Mess.

7. The Treasurer is responsible to the President for all funds, stock, accounts and Mess property. He will conduct the handing over of bar-stock monthly from the out-going to the in-coming caterer, reporting at once any deficiencies to the President. He should take stock weekly, and the following day render a certificate to the President, for the information of the P.R.I., stating the correctness or otherwise of the stock and cash on hand.

8. The Caterer, a Serjeant, not a member of the Mess Committee, is detailed monthly by roster, subject to the approval of the C.O., to act as caterer. He is excused from all other duties.

He takes charge of all bar-stock taken over at the commencement of, and received during his tour of duty, and is responsible for its safe custody.

He takes over all bills receivable at the commencement of his tour of duty and is responsible that the total credit authorized by the C.O. is not exceeded by any member.

He is responsible for the cleanliness of the Mess and the care of its property.

He is responsible that the bar is open only during authorized hours, and he will lock it, retaining the key, when it is necessary for him to leave the Mess.

GENERAL RULES OF THE SERJEANTS' MESS

1. All members of the Mess are of a rank which demands of them soldierly and dignified behaviour, and their conduct must at all times be worthy of their rank.

2. While all members, as such, are equal, they should remember that, as soldiers, their seniors are their superiors and they should accord them the deference which for that reason is always their due.

3. No entertainment should be given without the concurrence of two-thirds of a general meeting and the sanction of the C.O.

4. Every complaint concerning the Mess, whatever the subject, shall be made to the President or a member of the Committee. No member of the Mess, not a member of the Committee, is permitted to reprimand an employee of the Mess.

5. Discussions tending to create ill-feeling or misunderstanding are not permitted.

6. Nothing is to be sold or served in or from the Mess to any soldier below the appointment of Lance-Serjeant, nor to any civilian who is not an Honorary Member.

7. Members are always to be properly dressed when present in the Mess.

8. Dogs are not allowed in the Mess.

9. The Senior Warrant Officer or Non-Commissioned Officer present in the Mess is responsible for the maintenance of good order.

18. Officers' Mess

Etiquette in Officers' Messes varies considerably; what is customary in the Officers' Mess of a Line Regiment might be a faux pas in the Officers' Mess of another branch of the service.

It is the duty of the Senior Subaltern to instruct a newly-joined Subaltern in Mess Etiquette; the latter would do well to pay very close attention to such instruction and, for some time following it, he should keep his eyes and ears open and his mouth shut.

Here are a few "Don'ts for young officers:—

1. Don't smoke at breakfast or at luncheon until someone else is smoking or until you have asked permission of the senior Officer present.

2. Don't smoke at dinner until after the toast to His Majesty the King.

3. Don't fail to stand up when a Field Officer enters the Mess ante-room and remain standing until he tells you to sit down. It is not necessary to stand up if another Field Officer enters, unless such Field Officer is the Commanding Officer. However, if you happen to be occupying the only remaining comfortable chair, it might very well be in your best interests to unobtrusively vacate it.

4. When the toast to the King is drunk, don't say "God Bless Him." This is a Field Officer's prerogative.

5. Don't draw your sword, don't mention a woman's name, don't discuss religion or politics in the Mess.

6. Don't do or say anything in the Mess that you would be ashamed to do or say in your own home.

7. Don't take a drink when on duty.

8. Don't play cards for stakes that you cannot afford.

9. Don't forget the limited size of your pay cheque when you feel the urge to order a drink. Remember that Mess bills must be paid by the seventh of each month. Many a promising officer has had to resign his commission because, in attempting to be a good fellow, he lived beyond his means.

10. When talking to a Field Officer, don't "Colonel" or "Major" him. End your sentence with "Sir."

11. When Subalterns are talking with Captains, they should not "Captain" them, but should use their surnames. For example, "Thanks, Jones" is correct, but "Thanks, Captain Jones" is incorrect. And "Thanks, Captain" is even more so.

18a. Range Discipline

An officer should be present before any firing is carried out on any range.

Weapons will always be pointed towards the butts during inspection and when loading and unloading takes place.

No one, except the firers, the instructors and the officers on duty, will be allowed on the firing point.

When it is necessary for anyone to be in front of the firing point or when firing is suspended for any reason, rifles will be laid on their sides with bolts open. M.M.G. will hang the locks. L.M.G. will remove Magazines. Everyone will stand clear of weapons and they must not be touched.

Dummy Cartridges will not be taken on the range, except for use in stoppage practices.

Firing will not take place until the danger flags are hoisted and look-out men posted according to the by-laws and standing orders.

A red danger flag will be hoisted at the butts as a warning to cease fire. The flag will be kept up until the whole of the butt party is under cover. No one will leave the butts until the cessation of fire has been notified from the firing point. When cessation of fire is required, the superintending officer at the firing point will normally give the order.

A red flag will be hoisted at the firing point when no firing is taking place. It will always be hoisted when the danger flag is flying at the butts.

Detailed Safety Precautions (all ranges) are shown in S.A.T.I. Pamphlet No. 1 Weapon Training 1937. Pages 41 to 47 inclusive.

CHAPTER III

MILITARY LAW

19. Military and Martial Law

1. *Military Law*.—To enforce discipline we have Military Law; a law which governs the soldier in his capacity as a soldier, in peace and war, at all times, in all places.

Military Law, as distinguished from the Civil Law, is the law relating to and administered by military courts and concerns itself with the trial and punishment of offences committed by soldiers in order to maintain discipline amongst troops.

Military Law is regular in its procedure and is administered according to an authorized code. It is embodied in the Army Act and the Militia Act of Canada, which Acts are supplemented by Rules of Procedure, M.M.L. Part I, and the King's Regulations and Orders for the Canadian Militia.

A British subject, on becoming an Officer or a soldier, remains amenable to Civil Law as a citizen. M.M.L. I, 2-3.

2. *Martial Law*.—Martial Law means the suspension of ordinary law and the government of a country (or parts of it) by military tribunals. The object of Martial Law is to maintain order where there is no Civil Law or where Civil Law has ceased to exist. M.M.L. I, 7.

3. *Lawful Command*.—A lawful command means not only a command which is not contrary to the ordinary law, but one which is justified by Military Law. M.M.L. III, 12.

4. *A.A.A.A.*—The Army Act has of itself no force, but requires to be brought into force annually by another Act of Parliament, (now called "The Army and Air Force [Annual] Act"), thus securing the constitutional principle of the control of Parliament over the discipline without which a standing army and air force cannot be maintained. These annual Acts afford opportunities of amending the Army Act, of which considerable use is made. M.M.L. II, 33.

5. *The Army Act*.—The Army Act is an Act of the British Parliament dealing with discipline, Courts-Martial, enlistments, etc. M.M.L. I, 3.

6. *The Militia Act*.—The Militia Act is an Act of the Canadian Parliament respecting the Militia and defence of Canada. R.S.C. 1927, Chap. 132.

7. *Rules of Procedure*.—The Rules of Procedure lay down the legal method of procedure to be followed in the investigation and trial of a person tried for an offence under the Army Act. A.A. 70.

8. *King's Regulations and Orders for the Canadian Militia*.—These are formed under the authority of the Militia Act 139. They are regulations superimposed on the actual law as laid down in the Army Act and Militia Act. M.A. 69.

9. *Manual of Military Law, Part I*.—Generally speaking, is an explanation of the law. To assist one when in doubt, the footnotes frequently provide the necessary reference to the Act itself.

10. Persons Subject to Military Law.

i. All persons subject to Military Law are so subject either as "Officers" or "Soldiers". It should be noted that W.Os. and N.C.Os. come under the expression "Soldier," but are not included if the expression "Private Soldier" is used. A.A. 190 (4) (6).

ii. Members of the P.A.M. are subject to Military Law at all times. M.A. 69 (2).

iii. Members of the N.P.A.M. are subject to Military Law at those times stated in — M.A. 69 (2).

20. Discipline

1. *Discipline essentially means obedience to orders, which is the first principle and duty of all soldiers.*

The aim and object of discipline, however, is not only to insure obedience to authority, but also to produce order and establish that cohesion between the individuals composing a military force, which is essential to obtain complete success in whatever duty or operation it may be engaged in.

Such cohesion is the foundation of a mutual trust and reliance extending through all ranks from the highest to the lowest, besides securing a compliance by individuals with the orders they may receive, and gives rise to an intelligent desire to carry out the instructions of superior authority, not only in the letter but also in the spirit, and, furthermore, imparts a reliable courage which would otherwise be wanting in large bodies of men.

To those whose discipline is thoroughly good, difficulties become light and the apparently impossible easy of execution.

To troops whose discipline is imperfect either victory or defeat will be equally dangerous, as in either case they will get out of hand, and the unity of the military machine disappear.

In peace time laxity of discipline will cause inconvenience, annoyance and increased trouble to every one concerned; in war it means ruin and disaster.

Respectful obedience is the only sound and true basis upon which sound discipline can rest. It should not have its origin in fear or dread of punishment, but be rendered from the conviction that the orders emanate from a responsible superior, not only in rank but in knowledge.

The methods of command and treatment should be such as to ensure discipline, and, at the same time, foster self-respect. The use of intemperate language or an offensive manner is to be carefully avoided, and an even, patient and just demeanour cultivated.

Reproof for irregularities, neglect of duty or awkwardness should not be given to Officers or Non-Commissioned Officers in the presence or hearing of their juniors, lest their authority be weakened, or self-respect lessened—unless it be necessary for the benefit of example that the reproof be public.

2. *Offences.*—In order to commit an offence under Military Law, rendering him liable to arrest, a man must contravene provisions of the Army Act as laid down in sections 4 to 41, or the code as contained in the Militia Act.

21. Arrest and Military Custody

1. *Arrest and Military Custody.*—Military custody, according to the usages of the service means that when a person subject to Military Law commits an offence, the offender may be placed:—

- i. Under arrest: A.A. 45.
- ii. In confinement. K.R. Can. 445-452.

Military custody as regards private soldiers (not under sentence) means:

- i. Open arrest
- ii. Close arrest. } K.R. Can. 451.

2. *Open Arrest.*—Soldiers are not confined for minor offences, but are placed in open arrest, when they will not leave Camp

or Barracks, until their case has been disposed of. They will attend all parades, but will not be detailed for any duty.

K.R. Can. 451.

3. *Close Arrest.*—A soldier will not be placed in close arrest for offences unaccompanied by drunkenness, violence, or insubordination, unless confinement is necessary to ensure his safe custody, or for the maintenance of discipline.

K.R. Can. 451.

4. *Guard Detention Room.*—The accommodation available for a soldier in close arrest is known as the Guard Detention Room which is under the charge of the Commander of the Guard or the Military Police.

K.R. Can. 451.

5. *Military Custody of Officers, W.O.s. or N.C.O.s.*—Military custody in the case of an Officer, W.O. or N.C.O. (not under sentence) usually means arrest, but an Officer, W.O. or N.C.O. may, if circumstances require it, be placed for custody under the charge of a guard, picquet, patrol, sentry or provost-marshal.

A.A. 45. K.R. Can. 446-450.

6. *Arrest of Officer, W.O. or N.C.O.*—Arrest is either close arrest or open arrest. When arrest is not described as open arrest, it means close arrest.

An Officer under close arrest is not to leave his quarters or tent except to take such exercise under supervision as the Medical Officer considers necessary. When under open arrest he may take exercise at stated periods within defined limits, which will usually be the precincts of the barracks or camp of his unit.

He will not appear outside his quarters dressed otherwise than in uniform. He will not wear sash, sword, belt or spurs.

A.A. 45.

The same regulations apply to a W.O. or N.C.O.

K.R. Can. 445, 446-450-455.

22. Investigation of Charges

1. *Investigation of Charges.*—The first person to investigate a charge against a soldier will be his Company Commander at Company Office.

K.R. Can. 454.

2. *Punishments.*—The punishments which can be awarded a soldier may be divided into two classes:

i. *Summary Punishment* affects the soldier's pay, hence he has the right to elect, previous to the award to be tried by Court-Martial.

ii. *Minor Punishment* does not affect the soldier's pay, hence he has not the right to elect trial by Court-Martial.

Notes to A.A. 46.

23. Powers of Company Commander

1. *Powers of Company Commander.*—He may :
 - i. Dismiss the case ;
Admonish ;
Award a minor punishment, up to 7 days C.B. ;
Give extra Guards or Picquets ;
Fine for drunkenness.
 - ii. And in the case of N.C.Os. admonish and reprimand up to and including the rank of Corporal. A.A. 46 (9).
K.R. Can. 477.
 - iii. If the Company Commander considers the case too serious for him to deal with, he will remand the case for the Commanding Officer, writing "Remanded for C.O." on the Crime Sheet and forward it to the Orderly Room.
 - iv. When the soldier comes before the C.O. the Company Commander will attend with the man's Company Conduct Sheet. K.R. Can. 454.
 - v. Any punishment awarded by the Coy. Comdr. will be recorded on Minor Offence Report and forwarded to Regimental Orderly Room. K.R. Can. 457.

24. Powers of the Commanding Officer

1. *Powers of the Commanding Officer.*—The C.O. may :
 - i. Dismiss the case.
Admonish the offender.
Award a minor punishment up to 14 days C.B.
Award a summary punishment up to 28 days detention (providing the soldier does not elect trial by D.C.M.).
Extra Guards and Picquets (which are only awarded as a punishment for minor offences or irregularities when on or parading for these duties).
Fines for drunkenness according to scale.
Stoppages and Forfeitures.
Remand the accused for D.C.M.
 - ii. And in the case of N.C.Os. admonish reprimand or severely reprimand, or remand for D.C.M. A.A. 46.
K.R. Can. 470, 472-473. R.P. 2. K.R. Can. 333.

Note: N.C.Os. of the N.P.A.M. hold rank only during the pleasure of their C.O.
K.R. Can. 333.

25. Penalties

1. *Discipline at Schools.*— See K.R. Can. 408.
2. *Scale of Fines for Drunkenness.*—

1st offence.....	No fine
2nd offence.....	\$ 5.00
3rd and subsequent offences.....	10.00
but, if within six months.....	15.00
and, if within three months.....	16.00

 K.R. Can. 486-494.
3. *Forfeitures.*—A soldier forfeits his pay for every day of absence without leave, for every day undergoing detention, and for every day awaiting trial by Civil Court or Court-Martial for an offence of which he is afterwards convicted.
A.A. 138 (1).
4. *Stoppages.*—A soldier is placed under stoppages to make good loss or damage to arms, clothing, equipment, etc., Barrack Damages, Hospital and Regimental charges.
A.A. 138 (2) (3) (4).
5. *Severe Reprimand.*—Only applicable to N.C.Os. — entails entry in Regimental Conduct Sheet. K.R. Can. 1518.
6. *Reprimand.*—Only applicable to N.C.Os. — entails entry in Company Conduct Sheet. K.R. Can. 1518.
7. *Admonition.*—A rebuke — involving no entry in Conduct sheet, unless a forfeiture of pay is entailed, or in a charge of drunkenness. K.R. Can. 1523.
8. *Regimental Conduct Sheets.*—A Regimental Conduct Sheet is made out for every Officer, W.O., N.C.O. and man. Kept in Regimental Orderly Room. K.R. Can. 1517-1521.
9. *Company Conduct Sheets.*—A Company Conduct Sheet will be kept for each N.C.O. under the rank of Staff Serjeant, and each man, by the Company Commander.
It will, if containing any entries, be destroyed, and a blank one substituted :
 - i. On completion of six months from the date of attestation.
 - ii. After every continuous period of two years, during which he shall not have incurred an entry.
 - iii. On attaining the rank of serjeant.
 - iv. On discharge. K.R. Can. 1524.

10. *Field Conduct Sheets.*

K.R. Can. 1527.

11. *Record of Punishments*—*N.P.A.M.*—Any punishment awarded by a C.O. and any pecuniary penalty imposed upon a soldier of the N.P.A.M. will be recorded in a book to be kept by the C.O.

K.R. Can. 1526.

12. *Complaints.*—Any Officer or soldier having a grievance may appeal for redress through the proper channels, in accordance with the Army Act 42-43.

Everything in the nature of combination to obtain redress of grievances is strictly forbidden among individuals. Each individual must speak for himself alone. Appeals for redress by "round robins" or by means of any document bearing the signature of more than one complainant are strictly forbidden. Anonymous complaints are the publication through the medium of the press of anything calculated to act injuriously on the interest of the service, and are strictly prohibited.

K.R. Can. 417-419

26. *Courts of Inquiry and Boards of Officers*

1. *Boards and Courts of Inquiry.*—A Board of Officers or Court of Inquiry may be assembled by the Minister, or by an Officer in Command, to assist in arriving at a correct conclusion on any subject; *i.e.* conduct, losses, deficiencies, illegal absence, injuries, deaths, quality and quantity of stores, etc. It may be required to give an opinion.

A Board of Officers or Court of Inquiry may consist of any number of members. Three members, the senior acting as president, will in ordinary cases be sufficient.

A Board of Officers differs only from a Court of Inquiry in so far that the object for which it is assembled should not involve any point of discipline.

All proceedings of Boards of Officers and Courts of Inquiry are recorded on M.F.B. 303, and signed by the president and members.

R.P. 124-125. K.R. Can. 625-645.

2. *Liability to Military Service.*—All male inhabitants of Canada between the ages of 18 and 60 years are liable to service in the Active Militia, providing they are not exempt by law and are British subjects.

M.A. 8-9.

3. *Subject to Military Law.*—A man is subject to Military Law in the following circumstances:

Permanent Active Militia: at all times.

M.A. 69 (3).

Non-Permanent Active Militia:

- i. When called up for active service.
- ii. At annual drill or training.
- iii. Whenever on military duty or in uniform.
- iv. When going to or from parade.
- v. When he is a spectator in plain clothes, or in uniform at a drill or parade of his own corps.

M.A. 69 (2).

4. *Recovery of Value of Lost or Damaged Property.*—The Officer Commanding any Corps may recover the value of such articles of public property or property of the Corps as have become deficient or damaged, or damaged while in possession of his Corps, otherwise than through fair wear and tear or unavoidable accident, from the Officer, man or men responsible therefor.

M.A. 44.

5. *Punishments.*—The Militia Act lays down special ways of punishing members of the Non-Permanent Active Militia for military offences, when at drill, etc. They may be brought before a civil magistrate and fined various amounts according to the seriousness of their offences.

M.A. 103-124.

27. *Aid to the Civil Power*

1. *Aid to the Civil Power.*—The Militia may be called out in aid of the civil power by the D.O.C. or, in his absence, by the Senior Officer answering for him, on a requisition in writing from the competent civil authorities.

M.A. 75-85. K.R. Can. 848-867.

- i. Attorney General
- ii. Proviso as to Permanent Force
- iii. Power to call out Militia.
- iv. Form of Requisition.
- v. Expenses and Cost.
- vi. Withdrawal of Troops.

2. *Active Service.*—Every member of the Militia, called out for active service, shall attend at such time and place as is required by the Officer Commanding.

M.A. 64-65.

CHAPTER IV

MAP READING

28. Proficiency

Without maps modern war is almost impossible. It follows that the acquirement of the power to grasp quickly and assuredly the essential features of maps forms an important feature of military education. For proficiency in map reading the knowledge of the expert in map making is not required. Proficiency may be said to comprise, first, an understanding of the various conventions by which natural and artificial features of country are portrayed on maps; second, the power to visualize rapidly and accurately the features represented; and third, the capacity to make full and ready use in the field of all the information that a map is intended to provide.

The competent map reader must then be able to:

- i. Estimate approximate distances and measure them accurately by the use of scales.
- ii. Interpret the various symbols of cartography.
- iii. Visualize the nature of the relief as shown by the contours.
- iv. Determine gradients and degree of slope from a map.
- v. Draw visibility diagrams from a map.
- vi. Set a map in the field and locate North on ground.
- vii. Identify his position on a map.
- viii. March by map, day or night.
- ix. Understand the compass and protractor.
- x. Understand the nature of grids.

29. Definitions

The following definitions of topographical forms and technical terms given in M.M.R., Sec. 8, are those most frequently encountered: Topographical Forms.

Basin.—(a) A small area of level ground surrounded or nearly surrounded by hills, and (b) a district drained by a river and its tributaries, e.g. the "basin of the Thames."

Col.—A neck or ridge of land connecting two mountains or hills. A col is lower than the mountains or hills it connects, and higher than the surrounding plain or valleys.

Crest.—The general line formed by joining the summits of the main ridge of a chain of mountains.

False Crest.—The line along which a lower steep slope changes to an upper gentle slope.

Dune.—A hill or ridge of sand formed by the wind.

Defile.—Any natural or artificial feature which causes a body of troops to contract its normal front during its passage through it, is a defile for that body. A mountain pass is the most common type of natural defile; a bridge, or a raised causeway through a marsh, is an example of an artificial defile.

Estuary.—The tidal mouth of a river.

Escarpment.—An extended line of cliffs or bluffs.

Foreshore.—That portion of the shore between high and low water at maximum spring tides.

Gorge.—A rugged and deep ravine.

Knoll.—A low detached hill.

Plateau.—An elevated plain.

Salient or Spur.—A projection from the side of a hill or mountain running out of the main feature.

Undulating Ground.—Ground which alternately rises and falls gently.

Watershed.—A ridge of land separating two drainage basins; the summit of land from which water divides or flows in two directions. A watershed does not necessarily include the highest points of a chain of mountains or range of hills.

30. Technical Terms

Bearing.—True bearing is the angle a line makes with the true north line.

Magnetic bearing is the angle a line makes with the magnetic north line.

Grid bearing is the angle a line makes with the grid north line.

All bearings are measured clockwise.

Contour.—A contour is an imaginary line on the surface of the ground at the same height above mean sea-level throughout its length. Contours may also be defined as the plans of the lines at which a water surface (of the ocean, for instance) would intersect the surface of the earth, were it raised successively by equal amounts.

Contour Interval.—The difference in level between two adjacent contours (generally known as the Vertical Interval).

Gradient.—A slope expressed by a fraction. Thus 1/30 represents a rise or fall of 1 foot in a distance of 30 feet.

Grid.—A system of squares formed by lines which represent progressive distances east and north of a fixed origin.

Horizontal Equivalent (usually written H.E.).—Is the distance in plan between two adjacent contours.

Vertical Interval (usually written V.I.).—Is the difference in level between two adjacent contours.

31. Conventional Signs

The object of conventional signs is to compress into the smallest possible space the largest amount of information which can be given without overcrowding the map.

Conventional signs vary in different series of maps according to (1) Scale; (2) the nature of the country; (3) the State which prepares the map; (4) the use to which the map is put.

Familiarity with conventional signs will make it easy to realize details shown and to visualize their appearance, and hence to appreciate what may be expected on the ground—to anticipate appearances of road turnings, rivers, woods, sunken roads, canals, railways, drains, etc. Look for the most striking features.

Colouring.—The colours used for conventional signs are: black for detail; blue for water and marsh; brown for contours, and green for woods.

Plates.—In Chapter 4 of M.M.R. are several excellent Plates showing the conventional signs used on British and foreign maps which the student is advised to study. The Plate reproduced here shows the conventional signs in use on Canadian Ordnance Survey Maps.

32. Scales

1. After the first general glance the scale of the map should be examined with a view to visualizing distances.

The word scale is used to denote the proportion which the length between any two points on a map or sketch bears to the horizontal distance between the same two points on the ground. Thus, if the length between two farmhouses measures 2 inches on the map and the horizontal distance over the ground measures one mile, the scale of the map is 2 inches to 1 mile.

Railway Station.....	
Post Office.....	
Church { Without spire or tower.....	
{ With spire or tower.....	
Centre of cross is centre of spire	
Saw mill.....	
Mill { Grist or Flour mill.....	
{ Other mill or factory, Cheese factory.....	
School.....	
Blacksmith shop, Garage.....	
Hotel or tavern.....	
House, Barn.....	
Telegraph or Telephone Line.....	
Telegraph Office.....	
Telephone Exchange.....	
Lighthouse.....	
Cemetery.....	
Triangulation Station.....	
Altitudes.....	
Bench Marks.....	
Marsh.....	
Woods..... (Deciduous)..... (Coniferous).....	
Contours..... (Elevation)..... (Depression).....	
Contours, Submarine (in Fathoms).....	
Electric Power Lines, on Steel Towers.....	
Electric Power Lines, on Wood Poles.....	
Provincial Boundary.....	
County Boundary.....	
Township Boundary.....	
Railways { Single Track.....	
{ Double Track.....	
Railway on road.....	
Cutting.....	
Embankment.....	
Road, Paved.....	
Road, Improved.....	
Road, Other.....	
Road, Waggon or Unused Road.....	
Path.....	
Canal and Locks.....	
Bridges { Masonry.....	
{ Steel or Iron.....	
{ Wood.....	
Swing Bridge (Steel or Wood).....	
Dam (Wood or Masonry).....	
Waggon Ford.....	
Ferry.....	
Cliff.....	
Quarry.....	
Sand or Gravel Pit.....	

A scale may also be expressed by what is known as the Representative Fraction, commonly written R.F., which means that one unit on your map represents a certain number of units on the ground. Thus the scale of a map of 2 inches to the mile may be expressed as R.F. $1/31680$ of which the numerator of the fraction 1 represents your map and the denominator, 31680 represents the actual distance on the ground. As there are 63360 inches in a mile, the scale of this map would be 2 inches to 1 mile.

There are therefore two ways of describing the scale of a map; in the first, the relation of map measure to ground measure is expressed in words and in different units, whereas in the second it is expressed in terms of a fraction with 1 as numerator, the unit in the latter case being immaterial.

AMOUNT OF MAP DETAIL DEPENDENT ON SCALE

2. It is important that the student should realize that the area of paper in a map of a given extent of country varies as the square of the scale, when the latter is expressed in terms of a fixed ground unit. Thus a country of a given area will cover four times as much paper on a scale of 2 inches to 1 mile as on a scale of 1 inch to 1 mile. It is therefore in general inadvisable to attempt to crowd upon a 1 inch map all the detail which appears, or would more correctly appear, on a 2 inch map.

CONVERTING

3. To find the number of miles on the ground corresponding to 1 inch on the map for which the R.F. is given, divide the denominator of the R.F. by 63360. Thus, if the R.F. is $1/31680$ the number of miles to the inch is $31680/63360 = 1/2$ a mile to 1 inch.

To find the number of inches on the map corresponding to 1 mile on the ground, divide 63360 by the denominator of the R.F.

Thus, if the scale is 2 inches to 1 mile, $63360/31680$ equals 2 inches to 1 mile.

CONSTRUCTION OF SCALES

4. We now come to the actual construction of scales.

To construct a sketching scale of 4 inches to 1 mile to show divisions of 100 yards.

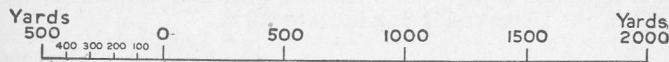
Here 4 inches represents 1 mile, or 63360 inches. The R.F. is therefore $4/63360$ equals $1/15840$.

The scale is to be between 4 and 6 inches in length; it will therefore show between 1 and $1\frac{1}{2}$ miles, say 1800 and 2600 yards. Take the greatest round number between these limits, say 2500 yards.

The length of scale will then be:

$$\frac{2500}{15840} \text{ yards} = \frac{2500}{15840} \times 36 = \frac{90.000}{15.840} = 5.68''$$

Draw a line 5.68 inches long and divide it into 5 equal parts, each representing 500 yards. Subdivide the left division into 5 parts, each representing 100 yards.



5. To construct a scale 2 inches to 1 mile to show hundreds of yards.

In this case 5000 yds., being nearly 3 miles, will clearly be represented by a length of nearly 6 inches.

2" equals 1 mile, or 1760^x

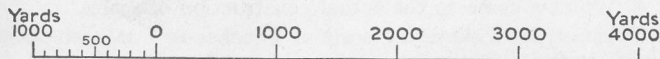
6" equals 3 miles, or 5280^x

$$\begin{array}{r} 880) 5000 (5.68'' \\ \underline{4400} \\ 6000 \\ \underline{5280} \\ 7200 \\ \underline{7040} \\ 160 \end{array} \quad \begin{array}{r} 31680) 180000 (5.68'' \\ \underline{158400} \\ 216000 \\ \underline{190080} \\ 259200 \\ \underline{253440} \\ 5760 \end{array}$$

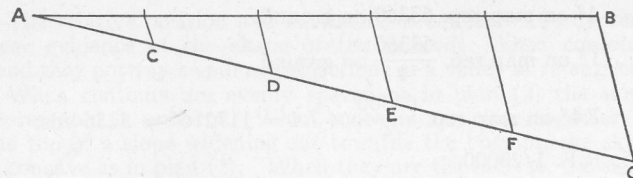
R.F. $\frac{1}{31680}$, and the length of the scale will be:

$$\frac{5000^x}{31680} = \frac{5000''}{31680} \times 36 = \frac{180000}{31680} = 5.68''$$

Draw a line 5.68 inches long and divide it into 5 equal parts, each representing 1000 yards. Subdivide the left division into 10 parts, each representing 100 yards.



Set off an auxiliary line AG at an angle of about 20 degrees; along this line mark off equal distances that are nearly the size



Division of a line into equal parts.

of the required divisions. The divisions are shown as C, D, E, F and G. Now join G and B, and through the points F, E, D, and C, draw lines parallel to the line GB. The line AB is now divided into five equal parts.

It may be necessary to sub-divide the first part of the line into several parts (say 10). At each end set up a perpendicular, one above the line and the other below. Along these mark off 10 divisions. Join the end of the line with the uppermost division, and by joining the other points equal divisions of the line will be obtained.

33. Problems and Their Solution

1. State scale in words when R.F. equals:

$$\begin{array}{lll} (a) \frac{1}{63360} & (b) \frac{1}{10560} & (c) \frac{1}{7920} \\ = 1'' \text{ to } & = 6'' \text{ to } & = 8'' \text{ to } \\ 1 \text{ mile.} & 1 \text{ mile.} & 1 \text{ mile.} \end{array}$$

2. State R.F. of following:

$$\begin{array}{ll} (a) 3 \text{ miles to 1 inch,} & (b) 1 \text{ inch to 400 ft.,} \\ \frac{1}{3 \times 63360} = \frac{1}{190080} & = \frac{1}{4800} \end{array}$$

3. What is the R.F. when:

$$\begin{array}{l} 1\frac{1}{2}'' \text{ rep. 1200 yds.} \\ 1.5'' \text{ rep. } 1200 \times 3 \times 12 \\ 1'' \text{ rep. } \frac{1200 \times 3 \times 12}{1.5} = 28800 \\ = \frac{1}{28800} \end{array}$$

4. Give the distance represented by measurements on the map of 7.4" at the scale of 4" to 1 mile:

4" on map rep. 63360 on ground.

1" on map rep. $\frac{63360}{4}$ on ground.

7.4" on map rep. $\frac{63360}{4} \times 7.4 = 117216" = 3256$ yds.

5. R.F. 1/20000.

1" = 20000 or 555^x approx.

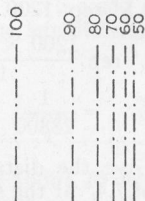
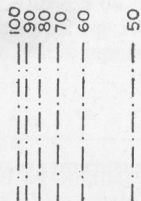
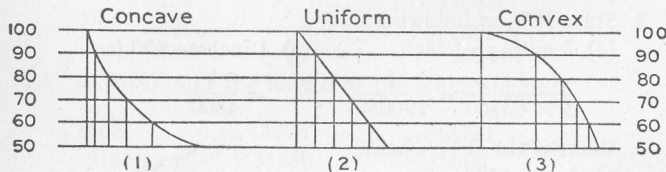
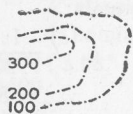
6" = 120000 or 3330^x approx.

We will make one scale 3500 yards.

$$\frac{3500}{20000} \times 36 = \frac{126000}{20000} = 20000 \left(\frac{126000}{60000} \right) \left(\frac{6.30}{60000} \right)$$

34. Contours

A contour is the representation of an imaginary line running along the surface of the ground at the same height above mean sea-level throughout its length.



The relative position and curvature of contours affords very clear evidence of the shape of the ground. When contours bend they portray a spur or projection; or a valley or re-entrant.

When contours are evenly spaced as in plan (2) the slope represented is uniform. When contours are close together at the top of a slope widening out towards the bottom, the slope is concave as in plan (1). When they are the reverse, the slope is convex as in plan (3).

The closer the contours are together, the steeper the slope on the actual ground. Contours always have a given and uniform vertical rise between each other, according to the map in use. If the map is contoured at 25 feet, there will always be a 25-foot rise between any two contours. This vertical interval is referred to as the V.I. of a map.

35. Setting a Map

A map is said to be set when it is laid out to correspond with the ground, so that the true north on the map corresponds with the North Point. If, after setting, the direction between features on the ground is then compared with the same direction as shown on the map, they will be seen to be parallel.

Setting by Compass.—Lay the compass centrally over the line of the magnetic north as shown on the map and, without disturbing the compass, turn the map slowly around until the north end of the magnetic north line on the map is exactly under the north end of the needle, marked by an arrow-head in the Service Prismatic pattern—the map is now set.

Setting by Object.—A map can be set on the ground without using the north point.

i. When the position can be identified as some point marked or known on the map, proceed to identify also on the map some distant object which can be seen. Join these two points by a straight line. Then turn the map about the position until this line points to the distant object—the map is again set.

ii. When the exact position is not known, it may be possible to set the map in line with some straight feature marked on it, such as a straight stretch of road, railway or canal. The map is then held so that the direction of this line, as it appears on the map and on the ground, is made the same.

Otherwise, join up two points on the map which can be seen on the ground. Get in a position between these points and revolve the map until the line drawn points to the two objects on the landscape.

To Find North on the Ground. —

i. With Compass: Let the compass needle swing until it comes to rest; then make allowance for magnetic variation.

ii. Without Compass: (a) North Star; (b) At end of March and end of September; (c) At noon; (d) Watch method.

Identify Position.—When a map is taken into the field, the reader must first identify his position and then place the sheet in front of him so that the topography depicted thereon may freely unfold itself as the representation of the landscape which is spread out before him. The exact location can be found by identification of fences, streams, canals, lanes, houses, roads, etc.

36. Gradients and Degree of Slope

The reader of a map must be able to estimate the rate of slope; *i.e.*, the Gradient. In map reading for military purposes, it is often of the utmost importance.

1. We will say that the map is 2" to 1 mile, or R.F.1/31680, and the V.I. is 25' with four contour intervals in a distance of 1000 yards.

$$25 \times 4 = \frac{100'}{1000 \times \frac{1}{3}} = \frac{100'}{3000} = 1/30 \text{ Gradient.}$$

$$\frac{60}{30} = 2^\circ \text{ (Degree of Slope).}$$

2. The Map is 2 inches to 1 mile or R.F.1/31680, and the V.I. is 25 feet with four contour intervals in 2 inches.

$$25 \times 4 = \frac{100'}{1760 \times \frac{1}{3}} = \frac{100'}{5280} = 1/53 \text{ (approx.) Gradient.}$$

$$\frac{60}{53} = \text{(Degree of Slope) } i.e., 1^\circ \text{ (approx.)}$$

3. The scale of the map is R.F.1/20000 and the V.I. is 12.5 feet with 8 contour intervals in $1\frac{1}{2}$ inches.

$$12.5 \times 8 = \frac{100'}{30000 \div 12} = \frac{100'}{2500} = 1/25 \text{ Gradient.}$$

$$\frac{60}{25} = 2^\circ 24' \text{ (Degree of Slope) } i.e. 2^\circ \text{ (approx.)}$$

Converting.—To find the gradient, the degree of slope being given.

1 degree equals a gradient of 1/60.

2 degrees equals a gradient of 2/60 equals 1/30.

6 degrees equals a gradient of 6/60 equals 1/10.

To find the degree of slope, the gradient being given.

A gradient of 1/12 equals 1/12 of 60, equals 5 degrees of slope.

A gradient of 1/8 equals 1/8 of 60, equals $7\frac{1}{2}$ degrees of slope.

A gradient of 1/3 equals 1/3 of 60, equals 20 degrees of slope.

Practicability of slopes.—

Slopes up to 5. Are practicable for all arms. Cavalry will charge more effectively up hill than down. Artillery fire is more effective down hill than up.

5 to 10. Close movements for infantry are difficult. Cavalry can charge up hill a short distance. Artillery moves with difficulty.

A slope of 8° will almost stop baggage waggons without extra horses.

10 to 15. Infantry can only move a very short distance in order. Cavalry can only trot a short distance up hill, and walk down hill. Artillery moves with great difficulty; fire ceases entirely.

15 to 20. Infantry cannot move in formed bodies, and can only fire singly. Cavalry can only ascend at a walk, and descend obliquely.

20 to 25. Infantry can only move in extended order. Light cavalry may ascend and descend obliquely one by one, with much difficulty.

25 to 30. May be climbed by men using their hands.

15 is the extreme limit of slopes admitting of manoeuvres.

37. Visibility

It is often of the utmost importance to discover from the map whether two points are mutually visible.

Draw a line joining A and B. Note any points on that line which are likely to obstruct the line of sight between A and B, and carefully estimate their position and height. Suppose there be such a point, D, whose height is 260 feet, and suppose the height of A is 300 feet and that of B 200 feet. Scale off on the map the distance A — D, and also the distance A — B, and suppose A — D is 1200 yards and A — B is 2700 yards.

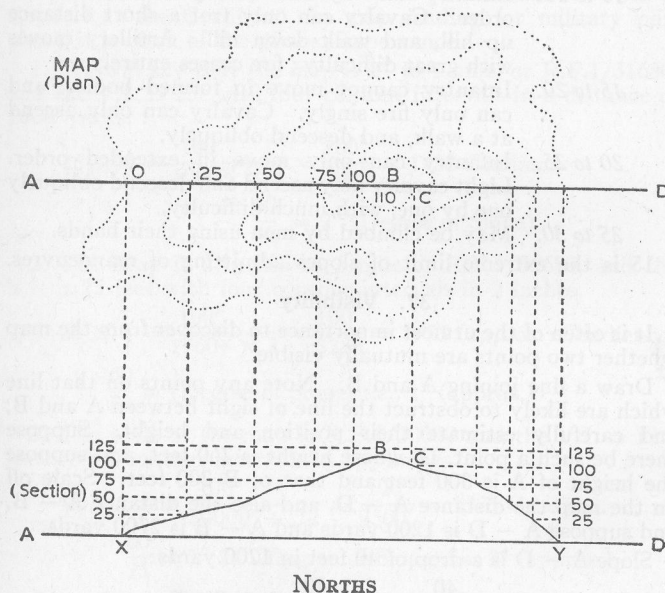
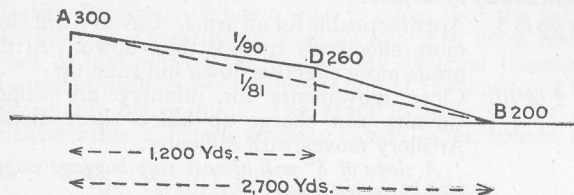
Slope A — D is a drop of 40 feet in 1200 yards:

$$\frac{40}{1200 \times 3} = \frac{40}{3600} = 1/90.$$

Slope A — B is a drop of 100 feet in 2700 yards:

$$\frac{100}{2700 \times 3} = \frac{100}{8100} = 1/81.$$

The slope A — B is steeper than A to D, therefore the point D will obstruct the line of sight from A to B. Suppose D has been found to be below the line of A to B, but there were several other points which might obstruct the line of sight, each would be tested in turn.



NORTHS

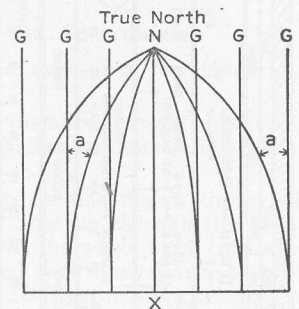
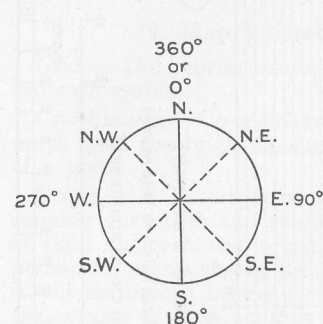
True North.— means the direction of the North Pole from the observer.

Magnetic North.— is the direction in which the compass needle points (unaffected by any local attraction).

Grid North.— is the direction in which the grid lines point towards the top of the map.

Magnetic Variation.— is the angle between true north and magnetic north.

Angle of Convergence.— is the angle between grid north and true north.



NX — Standard Meridian.
N — North Pole.
G — Grid North.
a — Angle of Convergency.

NX — Standard Meridian.
N — North Pole.
G — Grid North.
a — Angle of Convergency.

38. Bearings, Compass and Protractor

A bearing is the angle measured clockwise from a certain fixed line to any line in question — the fixed line may be True, Grid or Magnetic North.

Conversion of Bearings.— The bearing of any object on a map may be expressed in one of three ways, i.e. with reference to the true north, grid north or magnetic north. On a gridded map, all bearings must be given with reference to grid north, and not to true or magnetic north.

Gridded maps show in the margin the angle between grid north and magnetic north, with an additional note stating the angle between the grid north and the true north for that sheet. This enables the user of a map to convert a bearing given with reference to magnetic, or true north to grid north.

map reference of point P is 523204. If it is desired to describe point P more accurately, take hundredths of the square side instead of tenths, and use 8-figure reference.

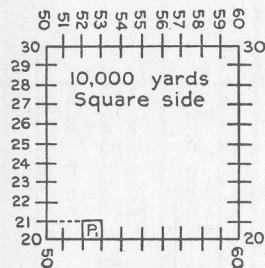
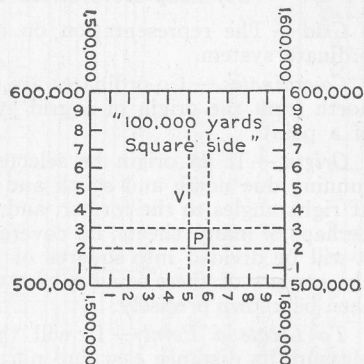
40. The Modified British Grid

This system of gridding has now superseded the British system. A convenient origin is chosen outside and to the

Each of the small squares
100,000 yards square side.

A	B	C	D	E
F	G	H	J	K
L	M	N	O	P
Q	R	S	T	U
V	W	X	Y	Z

Incidence of letters
on the grid.



south-west of the whole area of country to be surveyed, and through it are drawn axes true north and east. The grid is then constructed by drawing lines parallel to these axes at intervals of 100,000 yards. The whole area is thus divided into squares each having a side of 100,000 yards.

The squares are then subdivided into 100 smaller squares, each having a side of 10,000 yards. On any map sheet of a

portion of the area the distance of the corners of squares east and north of the origin are given in the margin. The distance of point P from the origin is 1,552,000 yards east and 520,000 yards north. To enable this reference to be stated in a more concise form, each large square is designated by a letter. These letters are not printed on the square but the arrangement of letters is shown by a diagram in the margin of the map called "The Incidence of Letters on the Grid." The reference of P is therefore stated as V 52 20. Such a reference gives the location of a point to the nearest 1000 yards. This is sufficiently accurate in working with a small scale map. With a large scale map, *e.g.*, Kingston and Vicinity 2" to 1 mile, greater accuracy is required. The small 10,000 yard squares are therefore subdivided into 100 squares each having a side of 1000 yards. In giving the reference of a point on such a map no letter is required, but six figures are used instead of four. For example, the map reference of point P₁ is 523204. This reference gives the location of the nearest 100 yards. The letter is unnecessary and is omitted. Two points of the same reference must be 100,000 yards apart and they cannot therefore both appear on the same sheet of a large scale map. There is therefore no possibility of confusion.

41. Map Enlargements

Enlarging a map may be advisable for one or other of the following purposes, viz. :—

- To serve as a basis for a more detailed sketch at a larger scale.
- To provide room for writing notes and descriptions.

The scale of the original must be stated on every enlargement. The method of enlarging a map and some examples are given in M.M.R. Section 59 and 60.

42. Photo Reading

The best way to master the art of photo reading is actual practice after tuition by an expert. Before receiving such tuition, the student is advised to read Chapter 12 of M.M.R.

CHAPTER V

FIELD ENGINEERING

43. Definitions

Breastwork.—A defence work of which the greater portion of its height is above ground level.

Crest.—The highest point of a parapet, usually the intersection of the superior with the interior slope.

Dead Ground.—Ground over which observed or unobserved fire cannot be brought to bear.

Parados.—A bank of earth constructed to give protection against reverse fire and the back burst of high-explosive shells.

Parapet.—A bank of earth constructed to give protection against frontal fire and the forward burst of high-explosive shells.

Traverse.—A buttress of earth provided between two adjacent portions of a fire or communication trench for protection against enfilade or oblique fire and to localize the effect of shell bursts.

Berm.—The space between the foot of the parapet or parados and the edge of the trench. Never less than 12 inches wide.

Fire Bays.—The parts of a trench between traverses; should not exceed 30 feet in length.

Command.—The vertical height of the crest of a work above the ground level or above the crest of a neighbouring work.

Slope.—

Interior.—The inner slope of a parapet extending from the crest to the fire step.

Exterior.—The outer slope of the parapet from the exterior crest to the ground level.

Superior.—The slope of top of the parapet immediately in front of the crest.

Spillock.—To mark out a line on the ground with the point of a pick-axe.

Relief.—A party of men who are on duty or who work for a given length of time.

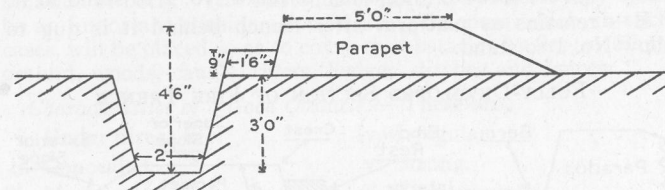
Tasks.—The amount of work to be completed by a man, or party of men, during one relief.

Task Work.—A certain amount of work to be completed, irrespective of the time it may take.

Time Work.—Work to be continued for a certain period of time, irrespective of the amount done.

44. Simple Defence Works

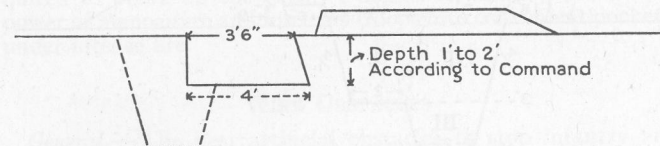
WEAPON PIT. (RIFLE OR L.A.)



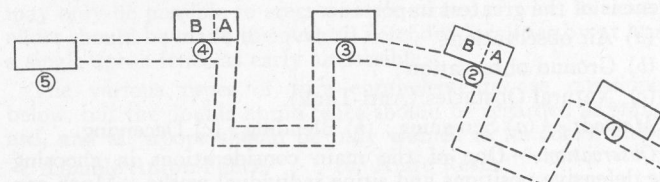
N.B.—Normally the weapon pit will be 6' in length, to accommodate two men.

Section Posts.—Types of Section Posts, showing how Weapon Pits may be connected up for intercommunication, are outlined in Infantry Section Leading.

WEAPON PITS. (M.G. SEC.)



Showing in dotted lines the trench dug behind platform in which No. 1 stands.



Dotted lines showing pits connected up.

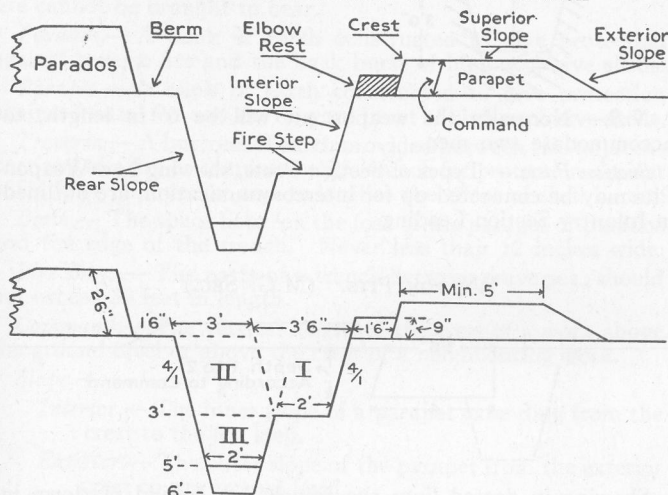
□ Rifle Pits 3' 6" wide by 6' to 8' long.

- (1) Three men.
- (2) 1 M.G. and 2 Nos.
- (3) Sec. Comdr., Range Taker and Orderly.
- (4) 1 M.G. and 3 Nos.
- (5) Sec. N.C.O. and 1 man.

A — is subsequently dug away to allow No. 2 to stand in it.

B — remains as platform after trench behind it is dug to allow No. 1 to stand.

FULLY-DEVELOPED SECTION OF FIRE TRENCH



General.— In siting and constructing field defences, concealment is of the greatest importance:

- (a) Air observation;
- (b) Ground observation;
- (c) Natural Obstacles (Anti-Tank).

Methods.— (a) Screening; (b) Blending; (c) Deceiving.

Observation.— One of the main considerations in choosing the defensive positions and siting individual works. Much can be done by clearance to improve the observation of the defenders.

Communications.— The improvement of communications within a position is of great assistance in the conduct of a defensive battle.

45. Obstacles

General.— Obstacles may be natural or artificial or a combination of both. The existence of natural obstacles may often be an important consideration in siting defences which, in such cases, will be placed so as to cover the obstacles by fire: swampy ground, woods, canals, rivers, hedges, ditches and fences.

Characteristics of a Good Obstacle.— These are:

- i. Under direct fire.
- ii. Concealed.
- iii. Not give away fire positions.
- iv. Irregular.
- v. Strong.
- vi. Transparent.
- vii. Not obstruct the defence.

Classification.— Obstacles may be broadly classified as protective or tactical, particularly with reference to wire obstacles.

i. *Protective Obstacles* are generally artificial and are required to prevent the defending troops being rushed by weight of numbers or surprise.

ii. *Tactical Obstacles* may be natural or artificial and are required to break up the enemy's attack formation, restrict his power of manoeuvre and force his troops into convenient pockets under intense fire.

WIRE OBSTACLES

General.— The best artificial obstacles to stop infantry are those made of barbed wire.

The construction of wire obstacles is the duty of the troops holding the defences which they protect. If time is short it may only be possible to erect a single strand of wire, but every effort should be made to cover all defended localities by at least a single apron fence as early as possible.

The various types of wire entanglements are mentioned below, but the double apron fence should be regarded as standard, and all troops should be fully trained in its construction.

- i. Double Apron Fence.
- ii. Single Apron Fence.
- iii. Spider Wire.
- iv. Knife Rests.
- v. Concertinas.
- vi. French Wire Entanglements.

46. Road Blocks

General.—Road blocks may be designed either as absolute obstacles or as temporary constructions. The object of the latter type is to check A.F.Vs. and to compel portions of the crew to leave the cover of their vehicles. Such blocks must therefore be covered by the fire of the defenders.

Siting.—Difficult for crew to see obstacle until close to it, or to turn around or move off road.

Construction.—

- i. *Carts* filled with stone, farm machinery, etc.
- ii. *Trees*, felled across road.
- iii. "*V*" *Trench*, cut in road, 1' 6" broad and 2' deep.
- iv. *Wire*, one or more belts of tangled wire.
- v. *Gaps*: often desirable not to close road completely.

CHAPTER VI

MARCHES

47. General

Troops may be moved by : —

- i. Sea.
- ii. Rail.
- iii. Navigable waterways.
- iv. Road (Marching or mechanical transport).
- v. Cross country (marching).
- vi. Any combination of these.

Note: — Air transport of small bodies has already been successfully accomplished.

When a large force is to be moved a comparatively short distance (60 miles for a Div.) by land, it is quicker to move by road, but as the distance increases it becomes more expeditious to use railway transport.

48. Sea and Rail

The shipping will be provided and the points of embarkation selected by the naval authorities.

On arrival each vessel is met by the M.L.O. or his assistants who convey the order for the disembarkation.

During the voyage the duty of the Platoon Commander is to maintain the discipline and health of his men and to see that they have the maximum possible comfort.

R.T.Os. form the channel of communication between troops and the railway service.

Each unit should be despatched as complete as the train accommodation permits, guns and vehicles should be on the same train as their teams, horses should not be separated from the men who ride or drive them. Mixing of different units on the same train should be avoided.

Troops are not to occupy the railway buildings or use the water supply without the authority of the R.T.O.

When troops entrain they will be halted alongside of the train and marched into the compartments as quickly as possible.

Care must be taken that each compartment is occupied by the full number ordered.

Once entrained no man is to leave his compartment without orders.

If troops are permitted to leave the compartments at stations en route care must be taken that order is preserved and that men do not move far from the train.

On detraining, troops will at once fall in and be marched off. Formed bodies of troops must not remain at a station or on its approaches a moment longer than is necessary.

Guns will be entrained fully equipped, waggons with their loads and water carts filled.

49. Mechanical Transport

Moves by mechanical transport may be made : —

- i. To and from areas ill-provided with railways.
- ii. To withdraw exhausted troops out of a battle to rest areas.
- iii. To reinforce quickly or to seize important points before the enemy can reach them.

Mechanical transport columns are especially vulnerable to attack from the air.

As a rule only dismounted troops will be carried.

As their transport must move separately, troops must carry their Bren Guns, rations and anything required for immediate use.

Embussing and debussing points should be on straight lengths of broad road with open ground on the right of the road side.

Troops should be told off in groups (one group per vehicle) beforehand and should not be on the embussing point or its approaches while the vehicles are arriving.

Care must be taken that each vehicle contains the full number ordered.

Equipment should be removed but all Bren Guns must be ready for immediate use in case of attack from air.

Platoon Commanders are responsible that their platoons embus quickly and in an orderly manner. The Platoon Commander will travel on the driver's seat of the leading vehicle occupied by his platoon.

Debussing must be carried out quickly and troops immediately marched clear of the debussing point.

50. Classification of Marches

1. Marches may be classified under three heads : —

- i. When there is no chance of meeting the enemy. In this case the comfort of the troops is the first consideration.
- ii. When it is possible that the enemy may be met. In this case tactical considerations take the first place but the comfort of the troops should also be considered.
- iii. When the march is undertaken in the immediate vicinity of the enemy. In this case tactical considerations must override all others.

2. Good marching depends on : —

- i. March discipline.
- ii. Physical condition of the troops.
- iii. Boots.
- iv. Condition of the roads.

3. *Starting Point.*— Before a force commences the day's march a starting point will be arranged. The head of the column to pass this point at a given time.

4. *General Rules.*— Troops march and halt on one side of the road only, leaving the other side free for traffic.

An officer should always march in rear of each unit, in order to see that : —

- i. No man falls out without permission.
- ii. The Sections or files keep closed up and covered from front and rear.
- iii. Step is maintained.

No trumpet or bugle call is allowed and compliments will not be paid during a march on service.

5. *Formations.*— The normal formation for infantry is a formation in threes :

Mounted Troops : Column of sections or half-sections.

Artillery : Column of route, guns and waggons in single file.

Cyclists : Column of half-sections.

Mech. Transport : Column of route, single file.

6. *Road Space.*— F.S. Pocketbook, gives tables of time, pace and road space.

7. *Pace*.—The rate of march must be uniform. Irregular pace is exhausting, especially to those in rear.

A forced march is made by increasing the number of hours marched not by increasing the pace.

The average rate of march (including short halts) of a large body of all arms is $2\frac{1}{2}$ miles per hour. Their average march is 15 miles per day.

8. *Halts*.—Normally halts will be made every hour from ten minutes to the clock hour to the clock hour.

During halts troops will be ordered to fall out. Officers on the opposite side of the road to the men.

A long halt of one hour should be made during marches of 15 miles or over, if possible in the middle of the march.

9. *Military Bridges*.—In crossing a military bridge troops must break step. If the bridge sways so as to become very unsteady the column must be halted until the swaying ceases.

10. *Cross Country Marches*.—In marching across country by day or night a knowledge of marching by compass or by the stars is essential.

11. *Night Marches*.—Night marches may be undertaken :—

- i. For concealment.
- ii. Owing to climatic conditions.

The pace is slower and all obstacles or irregularities of the road cause more loss of time and confusion than by day. This causes additional fatigue.

Guides will often be required and it is difficult to maintain touch and direction.

12. *The Platoon Commander*.—A Platoon Commander must see that his men's boots are kept in good repair. Prior to a march he must see that they have clean socks without holes or darns, that their equipment fits, that their waterbottles are filled and that if possible they have had a hot meal before starting.

During the march he is responsible for their march discipline (Pace, covering, dressing, quick falling in and out at halts, no smoking while marching, no excessive water drinking, no stragglers).

He should encourage singing during the march. During halts he should find out if any of his men are developing blisters or chafed feet and if so have them attended to at once.

Never deceive men as to how far they have to go ; give the reasons, if possible, for a long hard march.

Note:—When fording a river :

Infantry can take a depth of 3'.

Cavalry can take a depth of 4'.

Artillery can take a depth of 2' 4".

51. Type of Marches

1. Marches divide generally into two types :—

- i. "War." When tactical considerations are paramount.
- ii. "Peace." When convenience and comfort of the troops is of the first importance.

2. "War" Type.—

- i. Tactical requirements influence all arrangements.
- ii. Troops must be brought into action fit to fight.
- iii. Changes in order of march are best carried out overnight.

3. "Peace" Type.—

- i. When possible to increase comfort of men and animals.
- ii. Do not start from billets less than one hour after dawn.
- iii. Let the various arms, etc., go their own pace :—

(a) Infantry $2\frac{1}{2}$ to 3 miles per hour.

(b) Artillery $3\frac{1}{2}$ to 4 miles per hour.

(c) Cavalry and Cyclists 5 to 6 miles per hour.

(d) Tractor-Drawn Art. F.W.D. 5 miles per hour.

(e) Caterpillars $2\frac{1}{2}$ miles per hour.

(f) Lorries 6 miles per hour.

Note:—Although Cavalry and Cyclists are shown at same speed one likes to go down hills fast and up hills slowly, the other vice versa.

iv. Work out which should start first and the hour.

v. Hot weather, special arrangements may have to be made.

4. *Marching in Groups*.—Usually convenient for administration, but not for fighting. As far as possible avoid changing groups, once formed, as it complicates supply.

Keep whole such units as M.G.Bn. Do not split up amongst Brigades for a march. If desired, the whole may be attached to some Brigade Group.

5. Responsibility of "Group Commanders."—

- i. Billeting troops of the group.
- ii. Getting them to the group starting point.

6. *Operation Orders for Marches.*— March orders are written in the same form as other Operation Orders.

A march table is the best form to show the march of several units. The form may, if desirable, be altered to suit circumstances.

The lettering of the columns and the serial numbering of the units is only for reference but very useful. All distances and times must be carefully checked before the order goes out. Frame orders to give subordinate Commanders minimum of calculation and troops maximum of comfort.

7. Timing of Columns.—

- i. Time given is normally that at which the head of the main body passes S.P.
- ii. Head to pass AT and not BY the time stated.
- iii. Use "TAIL" to clear very cautiously.
- iv. In timing give as much latitude as possible.
- v. Time of start may depend upon :—
 - (a) Tactical situation.
 - (b) Season of the year.
 - (c) Length of march.
 - (d) How troops are accommodated.

8. Rate of March.— There are two rates :—

- i. 100 yards per minute up to and clear of the S.P.
- ii. Afterwards 1 mile in 20 minutes, or $2\frac{1}{2}$ m.p.h. including hourly halt.

Forced marches affect the distance not the speed. Condition of roads, width and gradient, load carried, heat, etc., may affect the speed.

Watch out for LEVEL CROSSINGS, they may upset all calculations.

Note:— By night; Road rate 1 to 2 m.p.h. Cross Country, rate 1 m.p.h. or less.

9. *Halts.*— To ensure halts at proper time watches should be synchronized beforehand.

Tactical considerations may rule out the long halt in marches of over 15 miles.

Men may well be fed during long halts, so troops must have warning of them. (Long halt, time of, given in march order).

10. *Routes.*— When alternative roads are available, consider distance, surface and gradient in allotting to different arms, if tactical situation permits.

52. Observation and Attack from Air

All tactical marches are now affected by the air situation. An observer can tell kind of troops and direction. Men can hide but not the vehicles. Halt with head short of road Junction. Marching at night has become more difficult to conceal owing to development of night air reconnaissance with illuminants. Night attacks are safer for planes than by day. Inferior air force, with good illuminants, can work almost unhindered. Make good use of favourable air conditions. *Example:*—

In April 1918, our air force held 2 whole German Divisions to same spot for 36 hours.

Our air force believed they caused 20,000 casualties on one road alone in one month.

In Palestine the air force blocked retreating Turks by bombing a defile.

Retreating Bulgarians suffered similarly.

Artificial fog and smoke barrages are possible developments for defence.

53. Night Marches

Night marches must become more and more common. They require more careful preparation. Guard against lack of sleep—have silent hours in daytime. Concealment by day is equally important.

F.S.R. Vol. II., 1935. Sec. 78. I.T. 1937. Sec. 82.

54. March Discipline

March discipline is everything that affects the man or beast on the march, and includes :—

- i. Pace.
- ii. Correct covering and distances.
- iii. No straggling.

- iv. Quick falling in and out at halts.
- v. Falling out clear of the road.
- vi. Self discipline in the use of water and in smoking.
- vii. Correct fitting of equipment.
- viii. Boots, socks and care of feet.

March discipline is the ceremonial of war.

A Battalion which is slack in march discipline is generally slack in battle.

Want of march discipline has been the cause of battalions being unable through fatigue to take part in a battle after a march.

The power of undertaking long and rapid marches without loss in numbers and energy is essential to success in war.

The military spirit of troops is reduced by excessive fatigue; fatigue can be reduced by careful training.

Before commencing a march Platoon Commanders should inspect the men's feet and socks as well as the fit of the boots. Equipment should also be fitted to prevent discomfiture and chafes. Water bottles should be examined for cleanliness.

CHAPTER VII

QUARTERS

55. General

Rest is absolutely necessary for man and horse and cannot be dispensed with for any length of time even in war.

Quarters take the form of:—

- i. Billets.
- ii. Close Billets.
- iii. Camps.
- iv. Bivouacs.
- v. Trench shelters and dugouts.

56. Billets and Close Billets

1. *Billets* (accommodation obtained from the inhabitants) are the usual form of quarters during war in a civilized country when not in the immediate proximity of the enemy.

They may be with or without subsistence or with partial subsistence. Subsistence can be supplied for double the number of the population for one week. Without subsistence ten men per inhabitant can be billeted in agricultural districts and five men per inhabitant in urban districts.

Billets give proper rest, shelter from weather, facilities for cooking, concealment from aircraft and the cellars afford cover in case of bombardment, but they cause dispersion of the troops.

2. *Close Billets* allow a portion of the troops to enjoy the advantages of billets, while the remainder bivouac close to the billets. This allows of greater concentration than billeting.

57. Camps

Camps admit of concentration, give shelter and are healthy, but tents require considerable transport and are not always available. For standing camps huts are healthier and more comfortable and may replace tents if a force is likely to remain halted for a long time.

58. Bivouacs and Dugouts

1. *Bivouacs* are encampments without tents or huts. They allow of concentration and readiness but are trying to the

health of men and horses in cold or wet weather. They should only be resorted to when tactical considerations render it imperative.

2. *Trench Shelters and Dugouts* are used in position warfare. Prolonged occupation of dugouts is trying to the health and detrimental to discipline and morale.

3. *Choice of Quarters.*—Choice of quarters is governed by the following considerations:—

i. In the presence of the enemy favourable ground for defence, concealment and facilities for economy of outposts will influence the choice of quarters.

ii. Good water supply is essential.

59. Camp Sites

The site of a camp or bivouac should be dry and on grass if possible. Steep slopes, clay, low meadows, newly-turned earth, narrow valleys, thick brushwood and old camp sites should be avoided. A gentle slope helps drainage.

60. Distribution of Quarters

1. The following rules will be observed in distributing troops to quarters:—

- i. Officers must be close to their men.
- ii. Both sides of the street should be occupied by the same unit.
- iii. Dismounted troops should be nearest the water supply.
- iv. H.Q. and Signal Office should adjoin each other and be clearly marked. H.Q. must be allotted position which will facilitate the transmission of orders.
- v. Depots should be near good roads.
- vi. Staff and Hospitals have first claim on buildings.
- vii. When shelter is limited mounted troops have precedence over dismounted troops.

Troops must not leave the immediate vicinity of their quarters without permission. If a state of constant readiness is ordered troops must not leave their quarters unless fully accoutred.

2. *Discipline in Quarters.*—All Officers will be saluted and strict discipline maintained at all times in quarters.

61. Billeting Party

When billets are to be occupied a billeting party should be sent ahead whenever possible.

The party for an Infantry Battalion (other units on similar lines) will usually consist of 1 Officer, 1 N.C.O. for H.Q. and 1 N.C.O. per Company. The Officer will be provided with a billeting demand (See F.S. Pocketbook, 1917, page 275).

On arrival at the allotted area the Officer will proceed to the Town Major or Area Commandant, or if neither of these have been appointed, to the civil authorities (Mayor or Chief of Police) and hand him the billeting demand.

Accommodation having been allotted and information received regarding water supply, sanitation or existence of infectious disease, the Officer will select Bn. H.Q., Guard Room, etc., and subdivide the accommodation amongst the companies.

The N.C.Os. will then mark on the doors, with chalk, the names of Officers or number of men or horses the billet is to hold.

The billeting party will then meet the incoming troops and guide them to their billets.

62. Sanitation

Neglect of sanitary precautions inevitably results in great loss of life and efficiency. Health depends largely on:—

- i. Purity of water supply.
- ii. Cleanliness.

Latrines, refuse pits and incinerators must be made immediately on occupying quarters and the first two filled in on leaving.

63. Water

The first troops to arrive at a halting place will mount sentries on all water required for use.

The water supply will be selected on the advice of the Medical Officer.

Water supply should be marked by flags:—

- i. White for drinking.
- ii. Blue for horses.
- iii. Red for washing.

A man requires one gallon per day.

A horse requires five gallons per day.

In standing camps five gallons per man and ten gallons per horse should be allowed daily.

64. Duties of the Platoon Commander

On arrival and before entering his own quarters a Platoon Commander must:—

- i. See that his men are settled down.
- ii. Note whether their quarters are comfortable, clean and sanitary.
- iii. Report to his Coy. Commander (Stragglers).

He is responsible for his Platoon's discipline and that all camp orders are obeyed (including sanitation and tidiness of quarters).

He must make sure that all his men know their assembly post and what to do in case of alarm (Land, Air and Gas) and that they know where roads lead to and the names of principal landmarks.

He must make sure that his men have the maximum possible comfort.

On vacating quarters he will see that his Platoon leaves its quarters in a thoroughly clean and sanitary condition. When in proximity to the enemy, every unit must be given an assembly post in the vicinity of its quarters, at which it will assemble in case of attack.

If units are scattered in billets it may be advisable to have squadron, battery and company assembly posts.

F.S.R., Vol. II, 1935.

CHAPTER VIII

INFANTRY IN BATTLE

65. Historical

With the introduction of firearms, the Pike and the Arquebus (Matchlock) became the chief Infantry weapons. The Spanish Infantry were the first to organize into definite bodies containing both Arquebusiers and Pikemen who acted in close co-operation (early in the 16th Century). The Matchlock Musket replaced the Arquebus and the proportion of Musketeers to Pikemen gradually increased. The Bayonet, originally a dagger stuck in the muzzle of the musket, was introduced about 1647 and the Improved Socket Bayonet supplanted the Pike about 1700.

The Flint Lock Musket began to replace the Matchlock about 1600 and was still in use at Waterloo (Brown Bess). Percussion Musket introduced in 1830. Muzzle-loading Rifles became general in 1854-66 (Crimea-Minnie Rifles). Breech Loaders 1866 (Prussian Needle Gun). Magazine Rifles 1886.

Grenades were first used towards the end of the 16th Century. Employed continually during the 17th and 18th Centuries, but became obsolete in the 19th Century. Revived at the siege of Port Arthur in 1904. (Russo-Japanese War).

The Following are the Present Weapons.—

66. Rifle and Bayonet

The *Rifle* is the personal protective weapon of the individual. Accuracy is its chief characteristic.

The *Bayonet* is the weapon for attack for hand-to-hand fighting. Men who are confident with the bayonet and determined to use it will always win when fighting gets to close quarters. It is often used at night or by patrols and sentries.

Range of Rifle — 600 to 2800 yards.

Weight — Rifle, 8 lbs. 10½ ozs. Rifle and Bayonet, 9 lbs. 11 ozs.

Length — Rifle, 3'8½". Rifle and Bayonet, 5'2".

The use of the bayonet, or the threat of it, will often enable infantry to drive the enemy from his position or cause him to surrender.

67. Light Machine Gun

1. The chief characteristic of the L.M.G. is its power of delivering a volume of fire rapidly with the employment of few men.

2. When fired from the:—

i. *Bipod Mounting*.—Effective range is 1,000 yards, and one man can maintain the gun in action.

ii. *Tripod Mounting*.—The distance may be increased, may be fired on fixed lines, when two men are required.

iii. *Anti-Aircraft Mounting*.—Two men required to operate the gun.

3. The gun is air-cooled and capable of a high rate of fire:—

i. *By Single Rounds*.—Economy in ammunition. Concealment. Surprise.

ii. *Automatic*.—Bursts of 4 to 5 rounds avoids overheating, strain and excessive expenditure of ammunition. Volume and accuracy.

4. *General Description*.—

Weight of gun complete with bipod.....22 lbs.

Weight of gun complete with tripod.....50 lbs.

Weight of tripod.....28 lbs.

Weight of spare barrel.....6 lbs.

Filled magazine (30 rounds).....2¾ lbs.

Weight of magazine box with 10 filled magazines.....35 lbs.

Length of gun overall.....45½ inches

Length of barrel.....25 inches

Backsight—Aperture.

Foresight—Blade.

Graduations—200 yards to 2,000 yards in 50-yard clicks.

5. *Ammunition*.—Magazines are carried in pouches—3 per man.

6. *Rate of Fire*.—If required, an average rapid rate of 120 rounds per minute with accuracy.

7. *The Light Machine Gun* is the principal weapon of the infantry and, except in cases where the need for extreme mobility outweighs the need for fire power, it should be carried by sections in action.
I.S.L. 1938.

68. 2-inch Mortar

1. The *2-inch Mortar* fires a 2-lb bomb, either smoke or high explosive. It is chiefly used as a smoke-producing weapon for offensive action. It is small and easy to conceal.

2. *Effective Range*.—500 yards.

3. *Transportation*.—Carried in the platoon truck, or divided into 2-man load.

4. *General*.—Forms a reserve of fire power in the hands of the Platoon Commander. In attack it will be kept well forward, prepared to go into action at a moment's notice, to assist in maintaining the momentum of the attack by neutralizing the fire of hostile posts which are holding up the advance of the leading sections. It is of little use at night. I.S.L. 1938.

69. Anti-Tank Rifle

1. The *Anti-Tank Rifle* affords a measure of protection against enemy light-armoured fighting vehicles. It is a single-shot, hand-operated weapon.

2. Its chief characteristics are:—

i. Great accuracy and great penetration.

ii. Comparative lightness and mobility.

iii. Pronounced flash and muzzle blast.

3. Easy to handle and fire against stationary targets, but for employment against moving targets, constant practice and training are required.

4. *Effective Range*.—500 yards.

5. *Transportation*.—Carried in platoon truck or divided into 2-man load with ammunition.

6. *General*.—Essentially a weapon of surprise and requires careful concealment. I.S.L. 1938.

70. 3-inch Mortar

1. The *Mortar* has a very high trajectory and the burst of its H.E. bomb has an effective area of 100 yards all round from the point of impact.

2. Fires a 10-lb. bomb which may be either H.E. or smoke.

3. It can be fired at night on fixed lines, or when blinded by fog or smoke.

4. It has no stoppages.

5. *Range*.—500-600 yards.

6. *Transportation*.—Carried in platoon truck or divided into 3-man load. I.S.L. 1938.

71. H.E. Grenade

1. The *Grenade* can be thrown by hand a distance of 25 to 35 yards.

2. The H.E. and Smoke Grenade can be fired from a rifle by means of an attachment called the "discharger," and both have an approximate maximum range of 200 yards and a minimum of 80 yards.

3. The high trajectory and steep angle of descent provides considerable searching power.

4. *Weight*.—H.E. about $1\frac{1}{2}$ lbs., smoke $1\frac{1}{4}$ lbs.

5. *Danger Area*.—Approximately 20 yards in all directions from point of burst. Large fragments may have sufficient velocity to inflict wounds up to 100 yards.

6. *Employment*.—H.E.—Street and trench-to-trench fighting.
Smoke — Blinding enemy posts.

I.S.L. 1938.

72. The Carrier Platoon

Its armour, speed and cross-country performance enables it to cross bullet-swept country without undue casualties, and it can protect itself against armoured cars with its anti-tank rifles.

The purpose of the *Carrier* is to move the L.M.G. and crew to a fire position from which the gun can be fired on the ground. The gun will only be fired from the *Carrier* in cases of emergency.

1. In attack it is available for : —

i. In a tank attack to advance rapidly from fire position to fire position to give close support to tanks unaccompanied by infantry.

ii. To assist the advance of riflemen by the infiltration method.

iii. To protect flanks.

2. In defence it will be used : —

i. To move fire power within the position from place to place, *i.e.*, to produce counter-attack by fire only.

ii. To support tank and infantry counter-attacks.

iii. Provided that it can be done without detriment to (i) and (ii) to provide depth to the defence by fire at long range, working for the purpose grouped.

3. In withdrawal this platoon will normally act as rear party or covering troops on the move and halted.

4. During the gaining of contact phase its primary role will be the protection of its own unit. I.S.L. 1938.

73. Machine Guns

1. The principal characteristic of the *Machine Gun* is its power of delivering a concentrated fire almost instantly in any direction.

2. Ease of concealment and fire control enable advantage to be taken of surprise.

3. *Mobility*.—completely mechanized.

4. *The Fixed Tripod* : —

i. Reduces the personal factor.

ii. Enables guns to be used for overhead and indirect fire.

iii. Enables direction and elevation to be maintained by day and night.

5. Most effective when fire is delivered in enfilade.

6. Being belt-fed and water-cooled, it is capable of sustained fire.

7. Principal role is support of infantry in attack and defence. May also be used in conjunction with mobile troops to hold, until relieved, ground which has been gained.

74. Fire

1. *General*.—

i. Platoon and Section Commanders should study the ground in front of them from the point of view of fire effect. Having considered how the fire power of the Platoon can be most usefully employed, "Fire tasks" are given by the Platoon Commander to his various Section Commanders. These are known as "Fire direction orders."

ii. All members of a Section should make themselves familiar with fresh aspects of the country as it comes within their view.

iii. Fire effect depends on the following : —

(a) Selection of the fire position.

(b) Selection of the target.

(c) Indication of the target.

(d) Finding the range.

- (e) Whether to use concentrated or distributed fire.
- (f) Clear fire control orders.
- (g) Good fire discipline in the Section.
- (h) Due economy of ammunition.

2. *Selection of Fire Positions.*—A Fire Position for any task requires:—

- i. A good view of the ground or target to be covered by fire.
- ii. Cover for the Section from ground and air observation and from fire.
- iii. Room for the free use of weapons.

3. *Field of Fire.*—

- i. Short ranges and surprise.—The shorter the range the more accurate is the fire. The greatest value is obtained from fire when combined with surprise.
- ii. Long-range fire.—Seldom advisable to open fire at long range.
- iii. Enfilade fire.—Most effective form of fire, especially when employed along an obstacle.
- iv. Extent of Field of Fire.—In defence, depends mainly on the ground. A field of fire of 100 to 200 yards will generally be sufficient for forward posts if flanking fire from other sections or machine guns is available, and if surprise can be obtained.

4. *Selection of Target.*—

- i. In attack, if Section held up, Section Commander must locate and engage targets on his own initiative.
- ii. In defence, fire task is given by the Platoon Commander.

5. *Indication of Target.*—

- i. Section Commanders must be able to describe a target so that it cannot be mistaken. The most simple form of indication is always the best, e.g., the direct method. For example—"Enemy on bridge."

ii. When direct method is impossible, the target is described with reference to some other point which all will recognize at once. This point is known as a "Reference Point." Starting from this point the men's eyes are led to the target by various aids:—

- (a) Direction (right or left).
- (b) Vertical clock ray.
- (c) Finger method.
- (d) Degrees.

These aids may be used in combination, but the directions must be kept as short and simple as possible.

iii. Reference Points.—must be prominent and unmistakable objects and should be named.

iv. Vertical Clock Ray.—The Reference Point is taken as the centre of a clock hanging vertically. The direction of any object is first pointed out by its position right or left of the centre followed by the appropriate clock hour. The words above and below should not be used when reference is made to 12 o'clock and 6 o'clock.

v. Finger Method.—This method is to give the number of fingers the target is to the right or left of a line between the observer and the Reference Point. The arm must be fully extended and the fingers held in a vertical position. The widest part of the fingers will be used. The Reference Point and the object should be clearly visible on each side of the fingers.

vi. Degrees Method.—This method is to give the number of degrees the target is to the right or left of a line between the observer and the Reference Point.

vii. Finding the range.—The two normal methods of ranging are:—

- (a) By observation of fire.
- (b) By judging distance.
- (c) The principal methods of judging distance are:—

- 1. Unit of measure (i.e. by measuring the intervening ground in terms of some familiar unit, such as 100 yards).
- 2. Appearance (i.e. by the appearance of the object in relation to its size and visibility).
- 3. Bracketing (i.e. by estimating the largest and the shortest possible distances to the target and taking the mean).

6. *Example of Fire Control Orders.*—

i. Unless otherwise stated, a Fire Control Order given to a Section implies that the light machine gun only will fire. If the gun is required to fire single rounds this should be stated. If rifles are also required to fire, the Section Commander must order "Gun and rifles."

ii. A Fire Order might contain the following:—

- (a) Designation of unit.
- (b) Range.
- (c) Indication.
- (d) Number of rounds or bursts.
- (e) Kind of fire.

iii. When the target is an obvious one and time does not permit of a full Fire Order, only essentials should be given, e.g. "Sights down — Enemy quarter left — Rapid fire."

iv. Fire Orders may be given in anticipation of the movements of our own troops or those of the enemy, e.g. "No. 5 Section — Four hundred — Hedge in front of farmhouse — No. 6 Section is moving up that covered approach on our right — We must cover their advance while they cross that bit of open ground — Await my order to fire."

v. Arrangements for night, smoke or fog. — The section weapons must be able to carry out their fire task in darkness, mist, fog or smoke. I.S.L. 1938.

75. Ground and Formations

1. *Field Signals*.—Control of troops, when deployed, can be exercised better and more quickly by signals than by verbal orders. In controlling troops by signals, a short blast of the whistle (*i.e.* the cautionary blast) will be blown before the signal is made, in order to attract the attention of the troops.

2. Signals are made with the hand, rifle, whistle blast and, in the case of gas alarm for mechanical transport, by motor horn. These various signals are given in Chapter 7 of Infantry Section Leading, 1938.

3. *Fieldcraft*.—Includes initiative, cunning and intelligence in the use of ground so that a soldier may arrive on his objective alive and fit to fight. Learn the art of using ground. Study ground to see how it will affect either yourself or the enemy in providing:—

- i. Observation points.
- ii. Fire effect.
- iii. Cover from view.
- iv. Protection from fire.
- v. Obstacles to movement.

4. *Types of Cover*.—Undulating ground, hedges and bushes, sunken roads, the dry beds of streams and ditches, and stand-

ing crops. Ground which the firer cannot see from his position is called "dead ground."

5. *Camouflage*.—Means the employment of artificial aids to effect concealment against ground or air observation.

6. *Principle of Observation*.—See without being seen. Learn how to observe and what to look for. Observers by night should work in pairs to lessen strain.

7. *Artillery Formations*.—On encountering hostile artillery fire, units will deploy into artillery formations, when approximate distances of 200 yards should be maintained between Platoons and 100 yards between Sections.

8. *Section Formations*.—Depend chiefly on ground and type of enemy likely to be encountered, and also on whether it will be necessary to fire. The formation to be adopted will, therefore, depend on:—

- i. Control.
- ii. Ground.
- iii. Fire production.
- iv. Enemy's fire.

9. The main formations with their advantages and disadvantages are as follows:—

<i>Formation</i>	<i>Advantage</i>	<i>Disadvantage</i>
File	Close formation facilitates control and rapid movement.	Vulnerable. Not good for fire production.
Single file	Useful for certain types of cover such as hedgerows.	Not good for fire production.
Extended line	Useful for crossing open ground under fire.	Difficult to control.
Arrowhead	Facilitates deployment to either flank.	Control is more difficult than when in file or single file.

I.S.L. 1938.

76. Scouts and Patrols

1. *General*.—Scouts are used for local protection to prevent the section from being surprised, for ground reconnaissance and for the collection of other information. When the position of the enemy is unknown and the ground cannot be seen, scouts should be sent forward. It may sometimes be necessary to employ scouts on an exposed flank to guard against surprise.

2. *Scouts* work in pairs, moving forward by bounds from one objective to another. The object of a scout is to see without being seen; he should use his rifle only in self-defence or in defence of other men.

3. *Patrols*.—The different kinds of patrols are:—

- i. Reconnoitring.—To get information.
- ii. Fighting.—Protective and other special purposes.
- iii. Standing.—To watch approaches.

I.S.L. 1938.

CHAPTER IX

CHARACTERISTICS

77. Introductory

Tactics, like boxing, might well be termed the art of self-defence; the self in Tactics might vary from one individual soldier to an army. To learn and to teach Tactics is much simplified if one keeps this boxing simile in mind.

For example, in estimating what chances of victory one boxer has over another, we must study certain relative attributes of the two opponents:—Weight, Reach, Mobility of Feet and Fists, Ability to Take Punishment, Courage, Condition, etc.

Without knowledge of these attributes, we have no way of judging the probable victor. And so it is in Tactics: without knowledge of the attributes or characteristics of Cavalry, Artillery, Infantry, etc., we cannot judge what they are capable or incapable of doing. The characteristics of the combatant arms of an army that we must learn about are the same as the boxer's. For instance, we must grasp that the "Reach" or "Range" of Artillery is considerably greater than that of Infantry: also, that the "Weight" of an Artillery shell is very much heavier than a rifle bullet: further, that the "Mobility" and also the "Ability to Absorb Punishment" of an armoured fighting vehicle is far ahead of the Infantry.

Some military students may think that as long as they know thoroughly all the attributes of their own arm of the service, that is all that they need to worry about. If they hold this opinion, they are making a great mistake. If a boxer thought along the same lines and failed to study his opponent's mobility, hitting power, etc., etc., his ring career would be a short and sad one.

If you want to fight your Section, Platoon, Company, Squadron, Battery or any other unit successfully, that is, with the least damage to it and the greatest possible damage to your opponent, you must know exactly what your opponent is capable of in "Offence" and "Defence." For instance, how fast he can move, from what angle and range he can hit you, and with what weight he can hit you. If the above is borne in mind, the student will find the study of Tactics the most absorbing of all military subjects.

78. Co-operation

The full power of an army can only be exerted when all its parts act in close combination. This is not possible unless the members of each arm understand the characteristics of the other arms. Each has its special functions and limitations, and depends on the others to make good its deficiencies. Therefore care must be taken that the various arms are allotted tasks which will allow of their special qualities to be used to the best advantage.

79. Cavalry

1. The principal characteristics of mounted troops are :—
 - i. Mobility.
 - ii. The power of dispersion.
 - iii. The power to deliver a mounted attack.
2. Weapons — Sword, Rifle, L.M.G., V.M.G. and Revolver.
3. With these the Cavalry can :—
 - i. Attack mounted.
 - ii. Act dismounted.
 - iii. Combine mounted action with fire (hence exploits the advantages of mobility.)
4. Cavalry cannot take cover readily and are considerably hampered by darkness.
5. Especially suited for :—
 - i. Reconnaissance.
 - ii. Protection.
 - iii. Participation in pursuit or withdrawal.
 - iv. Raids.
6. In dismounted action can break off an action more readily than infantry.
7. Its mobility renders it an effective local reserve.
8. Can undertake most infantry work but the men required for the care of horses reduces the number of rifles which can actually be brought into action.
9. Cavalry unaided has little striking power.
10. Divisional Cavalry — Now completely mechanized and equipped on a combined light tank and scout (armoured) carrier basis.

11. Weapons — Rifle, .303" and .5" M.G., L.M.G. and Anti-Tank Rifle.

12. Tasks to be expected of Cav. Regts. have not greatly changed on account of mechanization.

80. Artillery

1. The general characteristics are. —
 - i. Range.
 - ii. Accuracy.
 - iii. Fire power.
 - iv. Mobility.
2. Its role is to assist the other arms in breaking down opposition and to afford all possible support to the infantry.
3. The ability of Artillery under certain conditions to develop an overwhelming bombardment and to engage targets by day or night with accuracy, the possibility of barrage fire and counter-battery work, the power conferred by observation from the air and by the use of well-organized harassing fire render this arm highly important.
4. To justify the opening of artillery fire, there must be a definite tactical objective.
5. In moving warfare the difficulty of replenishing the ammunition supply, and in position warfare the physical exhaustion of the gun detachments entailed by rapid fire tend to limit the expenditure of ammunition. Expenditure of ammunition should as a rule be proportionate to the importance of the objective and the possibility of obtaining results.
6. *Divisional Artillery.* —
 - i. The Field Artillery is now completely mechanized, giving mobility and speed.
 - ii. The standard equipment for Field Artillery is the 25-pdr. gun/how. It has greater shell power than formerly and increased range (12,000 yards.)
 - iii. Advantages which go with one weapon able to perform the gun/how tasks, *e.g.* Simplification of ammunition supply, etc.

81. Engineers

1. All arms are responsible for the construction of their own works of defence.

2. It is the duty of the Engineers to assist them by engineering reconnaissance, plans, advice, technical supervision, provision of material and the construction of works requiring special technical skill.

3. Fd. Coys. and Fd. Park Coys. are now completely mechanized, giving greater mobility.

82. Infantry

1. Infantry is the arm which in the end wins battles. The co-operation of the other arms is necessary, but without Infantry they cannot defeat the enemy.

2. Weapons consist of :—

- i. Rifle and Bayonet.
- ii. Light Machine Gun (principal weapon).
- iii. 2-inch Mortar.
- iv. 3-inch Mortar.
- v. Anti-Tank Rifle.
- vi. H.E. Grenades.
- vii. Revolver.

3. With these the Infantry can :—

- i. Develop a large volume of fire rapidly and in any direction.
- ii. Combine fire and movement.
- iii. Engage an enemy at a distance or hand-to-hand.

4. Movement is slow (rate of march $2\frac{1}{2}$ to 3 miles per hour).

5. Distance covered small (average 15 miles per day).

6. Can move over almost any ground by day or night.

7. Can take cover more readily than other arms.

8. When roads permit, can be moved rapidly and brought fresh into action at distant points. (Although all transport is mechanized, extra M.T. has to be provided if the Battalion is to be moved complete by this means).

9. The main object of Infantry is to close with the enemy and destroy him; all other operations are merely preliminaries.

83. Armoured Fighting Vehicles (A.F.Vs.)

1. *Tanks.*

- i. Fire, movement and protection simultaneous.

ii. Affords protection to crew, armament and machinery from ordinary rifle and machine-gun fire, from shrapnel, grenade and small H.E. splinters.

iii. They are essentially an offensive weapon. Great moral effect and power of delivering successful surprise attacks.

iv. Can move over country without roads or tracks, cross trenches and low vertical obstacles. Crush down wire, climb slopes, traverse brushwood and shell-craters.

v. Tank obstacles are :— Inundations, marshes, deep cuttings, woods with large trees or tree stumps, rivers or canals, very rocky or mountainous country, and artificial obstacles.

vi. Size of Tank, noise of engine and distinctive tracks render them conspicuous.

vii. Vulnerable to land mines and a direct hit by a shell.

viii. Observation is limited.

ix. There are two types of "I" Tanks, both heavily armoured :—

(a) The larger has one .303" M.G. and one 2-pdr. gun mounted in a turret with all round traverse, and two smoke dischargers. Speed — 5 to 12 m.p.h. Radius of action — 50 miles. Crew of 4.

(b) The smaller type carries one .303" M.G. in a turret with round traverse, and two smoke dischargers. Radius of action — 75 miles. Crew of 2.

(c) Each Tank is fitted with wireless.

x. Role — Close co-operation with Infantry either in attack or defence.

2. *Armoured Car.*— It has a high rate of speed and wide circuit of action. Operates with greatest advantage in area where roads are good and numerous. Suitable for long distance reconnaissance, protective operations, or operations involving extensive or continuous movement.

84. Aircraft

1. Three classes of Aircraft are used for military purposes :—

- i. Aeroplanes.
- ii. Kite balloons.
- iii. Airships.

2. *Aeroplanes.*— Can cover great distances at a high rate of speed. Can fly by day or night in almost any weather except

snow or fog. They can attack other aircraft or take on ground targets with machine-gun fire or bombs.

i. Are of great value for : —

- (a) Reconnaissance (including photographic).
- (b) Personal reconnaissance by commanders.
- (c) Communication between widely separated portions of an army.
- (d) Co-operation with Artillery by observing fire, hostile artillery, defences and movements.
- (e) Contact Patrols (reporting progress of Infantry in attack).
- (f) Engaging the enemy on the battlefield, on the march or in quarters.
- (g) Pursuit of a beaten enemy or to delay a pursuing enemy.

The moral effect of attack from the air is very great. Aeroplanes form a difficult target.

They require considerable transport and good landing-places.

ii. *Duties.*—

- (a) Army co-operation.
- (b) Fighting.
- (c) Day bombing and long distance reconnaissance.
- (d) Night bombing and reconnaissance.
- (e) Troop carrying.
- (f) Supply.
- (g) Communication.

3. *Kite Balloons.*— Carry two Observers to a height of 5000 ft. and communicate with the ground by phone. They are extremely vulnerable to attack by gun fire and aeroplane, and should not be employed close to battle front. They are used to observe artillery fire and report enemy movements — can communicate V/T with Infantry.

85. Interdependence of the Various Arms

1. Infantry requires superiority of fire before it can close with the enemy.

2. Artillery and sometimes Tanks help it to obtain this superiority.

3. Without mobile troops and Aircraft, the other arms are hampered by lack of information ; cannot move in security, and are unable to pursue adequately a beaten enemy.

4. Artillery, Engineers and Tanks are only effective in conjunction with the other arms.

5. Cavalry are at a disadvantage unless accompanied by Artillery and armoured vehicles.

6. Land forces require the co-operation of Aircraft, while on the other hand, Aircraft when at rest require protection.

CHAPTER X

PROTECTION

86. General

Every commander is at all times responsible for the protection of his command against surprise from either land or air, and for preventing the enemy from ascertaining his strength and dispositions.

If an enemy is so closely watched that he can make no movement unknown to his opponents, surprise will be impossible.

If, in addition, he is prevented from obtaining information regarding his opponent's strength, dispositions, etc., his chances of making a successful attack will be minimized.

To ensure this, bodies of troops are detailed for the service of protection.

The commander of a protective detachment must keep his command in such readiness as the situation demands and is responsible that touch is maintained with the force protected.

1. Protective troops must.—
 - i. Obtain timely warning of hostile movements.
 - ii. Prevent the enemy's reconnoitring troops gaining information.
 - iii. If attacked, gain time at any cost for the main body protected to meet the attack.
2. Protection is afforded by.—
 - i. Advanced, Flank and Rear Guards.
 - ii. Outposts, when at rest.

The strength, composition and distance from the main body of protective troops will depend on the proximity, strength and characteristics of the enemy, the size of the force protected, the intentions of the commander, the nature of the ground and whether the protection is required by day, by night, or in a fog.

No more troops than necessary should be used for protective duty as it is exhausting.

3. The forms of protection considered are.—
 - i. Advanced Guards.
 - ii. Flank Guards.

- iii. Rear Guards.
- iv. Outposts.
- v. Anti-Aircraft.
- vi. Anti-Gas.
- vii. Anti-A.F.V.

87. Advanced Guards

The commander of a column advancing towards the enemy will be covered by an Advanced Guard.

1. *Tasks*.—The duty of the advanced guard is to protect the main body against surprise. Its task is:—

- i. To gain information about the enemy.
- ii. To prevent the enemy gaining information.
- iii. To prevent the main body being delayed.
- iv. To give main body time to deploy if necessary.

2. *Strength*.—The strength of the advanced guard cannot be laid down and will depend on:—

- i. The general situation.
- ii. The protection already provided.

It must be sufficiently strong to hold up an enemy attack long enough to enable the commander of the force protected to put his plan of action into execution. From $\frac{1}{8}$ to $\frac{1}{4}$ of the whole force may be taken as a rough guide.

3. *Distance*.—The distance between an advanced guard and its main body will vary with daylight, darkness, fog and the nature of the ground, but it must be sufficient to:—

- i. Allow any small bodies to be brushed aside without the main body being checked.
- ii. Give the main body time to deploy, should the enemy be met in force.
- iii. Prevent effective artillery fire being brought to bear on the main column.

The distance must not be so great as to allow of the advanced guard being overwhelmed before the main body could come to its assistance.

4. *Composition*.—As the duty of the advanced guard is to reconnoitre and fight, it should be composed of all arms, the proportion of each arm depending on the nature of the country.

5. *Division*.—The Advanced Guard is divided into:—

- i. Mobile troops.
- ii. Van Guard.
- iii. Main Guard.

6. *Mobile Troops*.—Consists of all the mobile troops with the Advanced Guard with the exception of small parties which may be detailed to the Van Guard or Main Guard for special purposes.

7. *Duty*.—Reconnaissance is the special duty of the advanced guard mobile troops. They move by bounds from one feature or obstacle to the next.

8. *Van Guard*.—The Van Guard is divided into:—

- i. An advanced party or leading detachment with patrols.
- ii. A support.

9. *Composition*.—The van guard is usually composed of infantry. Quick support should be available for the van guard company.

10. *Duty*.—Reconnaissance is the special duty of the van guard and responsibility for protecting the main guard against surprise, and to support the mobile troops should they encounter opposition which they are unable to overcome.

The van guard will move in sufficient depth to ensure its own local protection.

11. *Main Guard*.—The Main Guard comprises all the troops in the advanced guard other than the mobile troops and the van guard. It constitutes the reserve in the hands of the advanced guard commander available for employment according to the situation.

12. *Orders to Commander*.—The advanced guard commander will be told:—

- i. What is known of the enemy.
- ii. The intentions of the commander.
- iii. The strength and composition of the advanced guard.
- iv. Directions as to objectives to be gained.
- v. The hour at which the main body will start.
- vi. The route or routes which it will follow.
- vii. The orders given to the mobile troops operating ahead of him, and the orders given to other bodies of troops on his flanks.

viii. Instructions as to his line of action on meeting the enemy. An advanced guard commander will decide on the successive tactical features which are of importance in order to protect the march, and he will make his dispositions accordingly.

The times at which an advanced guard halts are regulated by the tactical situation and by the features of the ground, and do not necessarily synchronize with the hourly halts of the main body.

13. *Action on Gaining Contact*.—The advanced guard commander will be guided by his instructions and his knowledge of the intentions of the force commander. He should act with vigour against the enemy troops and seize any tactical points which will assist the attack of the main body.

If the enemy strength is unknown, the advanced guard commander should remember that:—

i. The first troops to be met will be the enemy's protective troops and until these are driven in it is rarely possible to obtain much information as to the enemy's disposition.

ii. His own main body is getting closer every minute and that he is therefore justified in deploying on a wider front than would otherwise be advisable.

iii. That hesitation and delay may allow the enemy to seize the initiative.

Once the enemy's troops have been driven in, the advanced guard commander will usually encounter opposition which he cannot overcome. He must then:—

i. Form a screen behind which the main body can deploy without interference.

ii. Use every endeavour to learn the enemy's dispositions in order to assist his commander in forming his tactical plans.

14. *Effect of Modern Developments*.—While the principles have not altered, conditions visualized in this Chapter have changed as a result of modern developments.

Although it is unlikely that there will be sufficient M.T. to lift all marching personnel, it may be taken:—

i. That mechanized movement has abolished the old rate of 2½ m.p.h. as applied to leading formations.

ii. That such infantry as is allotted to the advanced guard will be moved embussed as far forward as tactical conditions will permit.

Employment of Various Arms.—Careful consideration should be given to the employment of the various arms:—

- i. Divisional Cavalry.
- ii. Field Artillery.
- iii. Anti-Tank Artillery.
- iv. Engineers.
- v. Infantry.
- vi. Machine Guns.
- vii. Tanks.

I.T. 1937
F.S.R. II, 1935
I.S.L. 1938

88. Flank Guards

If there is any possibility of a column being attacked in flank, a Flank Guard must be detailed.

1. *Tasks.*—Its task is to protect the main body from surprise in flank and, if attacked, it must at all cost gain time for the main body to prepare for action.

Flank guards will normally be furnished by the main body, but may sometimes be dropped by the advanced guard.

The strength, composition, and distance from the main body are governed by the same principles that apply to advanced guards.

2. *Division.*—The Flank Guard is divided into:—

- i. Main Guard.
- ii. Flanking Party.

The flanking party will usually be broken up into a number of scouts and a support.

The main guard must also have scouts in front and behind for its own protection.

The flank guard in order to protect the main body may:—

- i. Move parallel to the latter. This involves moving in one direction and observing in another.
- ii. Take up a position on the threatened flank and hold it until the main body has passed, then move forward to a second position. This involves considerable mobility.

A flank guard loses touch with the main body more readily than advanced guards.

3. *Effect of Modern Developments.*—The speed, radius of action and hitting power of armoured formations are such to-day that if the flanks of our forces are not protected by the dispositions of the fighting troops or a large obstacle, the whole open flank from the forward formations back to the base will require forces permanently in a defensive position protecting the exposed areas on the army's flank.

F.S.R. II, 1935.
I.T. 1937.

89. Rear Guards

The first requirement of a force withdrawing in the face of the enemy is to be relieved from all the pressure of pursuit. This is effected by detaching a portion of the force as a Rear Guard.

1. *Strength.*—The strength of a rear guard to a retiring force will depend on:—

- i. The probable energy, strength and closeness of the pursuit.
- ii. The condition of the main body.
- iii. The character of the country.

Distance.—The distance between a rear guard and its main body must:—

- i. Not be so great as to allow the enemy any chance to interpose between them.
- ii. Be sufficient to allow the main body to move in comparative security.

2. *Composition.*—The rear guard to a force retiring is essentially a fighting force. It should be a self-contained force strong in:—

- i. Mobile troops.
- ii. Field Artillery.
- iii. Anti-tank Artillery.
- iv. Machine Guns.

"I" Tanks, if available, are a valuable reserve. Engineers should be available.

3. *Subdivision.*—When the pressure is not close, the Rear Guard is divided into:—

- i. Rear Party.
- ii. Main Guard.

4. *Rear Party*.— Consists of mobile troops and will be divided into:—

- i. Patrols.
- ii. Support.

5. *Main Guard*.— The Main Guard will consist of all rear guard troops not allotted to the rear party. It will move in march formation on the road along which the retirement is being conducted.

6. *Rear Guard Commander*.— The Rear Guard commander is responsible that touch is maintained with the main body. He should receive instructions as to the amount of opposition he is to offer and to what extent he is at liberty to break down bridges, burn villages and destroy railways and roads. He should know the intentions of his commander.

7. *Action of a Rear Guard*.— The action of a Rear Guard may be considered under two heads:—

- (a) When the pursuit is not close.
- (b) When in close contact with the enemy.

When the hostile pursuit is not close and the rear guard can continue to fall back without being driven in on the main body. In this case while continuing to go back, it will retard the enemy by obstacle and ambush. The responsibility for protection will fall mainly on aircraft and mobile troops.

When in close contact with the enemy and the rear guard cannot continue to fall back without being driven in on the main body. In this case the rear guard must compel the enemy to deploy as often and at as great a distance as possible.

This is done by taking up a succession of defensive positions which the enemy must attack or turn.

In occupying a rear guard position it is essential:—

- (a) To show as strong a front as possible (only a small reserve needed).
- (b) To make sure of good lines of retreat.

The position should:—

- (a) Command the main lines of approach.
- (b) Enable the artillery and machine guns to be used at long range.
- (c) Be difficult to outflank.
- (d) Afford concealment.
- (e) Lend itself to the placing of obstacles.

Before the enemy attack can fully develop, the rear guard withdraws to a position on the next favourable ground in rear.

8. *Timing of Withdrawal*.— The withdrawal of the rear guard may be carried out in two ways:—

i. On a timed programme, by fixing definite times up to which successive positions must be denied to the enemy. This will usually be the method when the pressure is close.

ii. By giving the rear guard commander latitude as to his time of withdrawal, providing that the protection of the main body is assured.

9. *Effect of Modern Developments*.— Although the term *Rear Guard* is still the official term for a force protecting a withdrawal, it should be noted that the term *Covering Force* is coming into general use.

The Main Guard still forms the bulk of the Covering Force. It is, in fact, the Covering Force complete, less the Mobile troops and attached. It is like the main guard which occupies and is prepared to fight on each bound to be held. This refers particularly to the hours of darkness as the Mobile troops will then have been withdrawn.

Rear Parties now refer to the last man away whether Cavalry or Infantry. In the case of the main guard positions they would be infantry, in some circumstances carrier sections; in the case of the Mobile troops withdrawing by day from one intermediate position to another between main guard bounds, they would probably be Light Tank Sections.

They form the means whereby simultaneous evacuation of each position all along the front of the withdrawal can be effected.

I.T. 1937. F.S.R.II, 1935.

90. Protection at Rest

1. *General*.— A force halted protects itself on the same principles as a force on the move, by sending out protective detachments in every direction from which hostile approach is possible.

The positions occupied by the outposts must afford facilities for:—

- i. Resistance.
- ii. Observation.
- iii. Concealment.

2. *Object*.— The object of these detachments, known as Outposts, are:—

- i. To prevent the enemy obtaining information.
- ii. To obtain information of the enemy's approach.
- iii. If attacked, to gain time.

3. *Duties.*— The duties of outposts are : —

- i. To give warning of any threatened attack (reconnaissance).
- ii. In the event of attack, to gain time at any cost for the commander of the force to put his plan of action into execution (resistance).

4. *Reconnaissance.*— Reconnaissance will consist of : —

- i. Watching every body of the enemy which is within striking distance so closely that he can make no movement the nature of which is not discovered.
- ii. Distant reconnaissance from the air and by mobile troops.
- iii. Standing and reconnoitring patrols.
- iv. Fighting patrols.

5. *Resistance.*— Resistance will consist of delaying the enemy on a line in front of the area to be defended by the main body.

6. *Composition.*— Outposts will usually consist of all arms. The mobile troops will furnish patrols for distant observation ; but, if the enemy is in close touch, patrolling will be carried out by the infantry.

There are three contingencies to be considered.—

- i. When beyond striking distance of the enemy's main force — guard against disturbance by hostile patrols.
- ii. When within striking distance of the enemy's main forces — deployment must be to an extent to meet any form of attack possible.
- iii. When in close contact with the enemy — Be in a state of complete readiness for action — (Sentries and patrols).

7. *Strength.*— The strength of outposts will vary with the tactical situation and the nature of the ground.

8. *Duties.*— The duties of the commander of an outpost detachment are : —

- i. Occupation of position — patrols to guard against surprise — decides on his dispositions.
- ii. Organization of position — explains his orders — details various duties — strengthens posts or localities — provision of obstacles — sanitation, etc.

9. *Rules.*—

i. Standing to arms — the hour before dark and an hour before dawn.

ii. Collisions with the enemy — avoid useless collisions.

iii. Alertness — be always ready for action.

iv. Obstacles and communications — strengthen as far as time permits — place obstacles, when possible, before the positions of the forward defended localities — improve communications — mark tracks where necessary — improve intercommunication between various portions of the outposts and also with the main body.

v. Detached posts — may be necessary in front of or on flank of position — value of and risk must be considered.

vi. Passage through outposts — No one other than troops on duty, deserters from the enemy, and flags of truce, will be allowed to pass through the outposts, except with the authority of the commander who details the outposts. Special arrangements made in the event of large numbers of refugees.

I.T. 1937 — Sec. 61.

91. Anti-Aircraft Defence

1. The means available for infantry for protection in the open are : —

- i. Concealment.
- ii. Suitable formations.
- iii. Small arms fire.

The position of troops may be given away to an air observer by the use of regular formations, by movement, dust, smoke and similar means.

2. When under observation, troops should : —

- i. Halt — in shadow, if possible.
- ii. Refrain from looking upwards.
- iii. Lie down and remain still.
- iv. Adopt irregular formations.
- v. Stop the engines of mechanized vehicles.
- vi. Conceal smoke of cookers, etc.

3. *Warnings.*—Air sentries should be posted to give warning of the approach of hostile aircraft. The signal is a succession of long blasts on the whistle. The efficiency of the defence will depend on : —

- i. Speed with which warning can be conveyed to subordinate commanders.
- ii. Quickness with which warning can be followed by executive orders for fire or movement.
- iii. Skill, steadiness and fire discipline of the troops.

4. *Small Arms Fire.*—

- i. On the move—the rifle will normally be used, but light machine guns should be brought into action if time permits.
- ii. At the halt—the fire of light machine guns is the most economical form of protection.
- iii. Picquetting—When it is important that movement should not be checked, it may be necessary to arrange for continuous protection, *e.g.*, picquetting certain portions of the route.

I.S.L. 1938 — Section 77.

92. Protection Against Gas

1. *Means of Protection.*—The means of protection against gas depends on the training and discipline of all ranks, and on good organization of all precautionary measures available for protection.

- i. Gas may be used by the enemy in many different ways:—

- (a) Shells.
- (b) Mortar Bombs.
- (c) Projector Bombs.
- (d) Air Bombs or Spray.
- (e) Gas Cylinders.
- (f) Ground Contamination Bombs or Mines.

- ii. Gas is used by the enemy in order to:—

- (a) Produce Casualties.
- (b) Harass our troops.
- (c) Contaminate ground.

2. *Characteristics of Gas.*—Divided into two different types of two groups each:—

- i. Persistent—A liquid giving off a vapour which may continue for days or weeks.

Tear Group.
Blister Group.

- ii. Non-Persistent—Rapidly dispersed by wind, hence only dangerous for short period.

Choking Group.
Nose Group.

3. *Protection.*—The following are issued for Anti-Gas protection.—

- i. Respirators.
- ii. Eye-Shields.
- iii. Capes.
- iv. Ointment.
- v. Gas Warnings.

I.T. 1937.

93. Protection Against A.F.Vs.

1. *General.*—The radius of action of A.F.Vs., raises special problems of protection, particularly effecting a force on the move. Even when no immediate threat exists, encounters with small numbers of hostile A.F.Vs. or troops in mechanical vehicles are possible. Advanced and rear guards should be given sufficient anti-tank weapons to make them capable of dealing with these attacks. The most economical form of protection may be to establish picquets.

2. *Road Blocks.*—The fullest use should be made of obstacles. Road blocks should be built at points where it is difficult for crews of approaching A.F.Vs.:—

- i. To see the obstacle until they are close to it.
- ii. To turn the vehicle around.
- iii. To drive off the road and move across country.

3. *Construction of Blocks.*—Road blocks may be constructed of:—

- i. Farm waggons filled with stone or other heavy material—farm implements.
- ii. Trees.
- iii. Anti-Tank Mines.
- iv. Wire.

4. *Defence of Block.*—Like all obstacles, road blocks must be covered with fire—rifles, light machine guns and anti-tank rifles. Alternative positions should be selected and posts cited for all-round defence. Clearance of field of fire and weapon pits must be considered.

I.S.L. 1938

CHAPTER XI

ATTACK

94. Principles

The principles governing the conduct of the Attack are the same whatever the size or organization of the force engaged may be; the same problems on a smaller scale will have to be met and overcome by the Company Commander and even the Platoon Commander who is conducting an attack, as would have to be faced by the commander of a larger formation. These principles are briefly as follows:—

i. A Sound Tactical Plan — To start off blindly without any pre-arranged idea of what you are going to do is courting disaster. In order to make your plans, it is essential that you have some information.

ii. Secrecy in Preparation — It stands to reason that if the enemy is aware beforehand of what you are going to do, your chances of success are greatly diminished.

iii. Surprise in Execution — A most important point . . . it necessarily depends greatly on secrecy beforehand, but it is not much avail if, after having prepared your plans with secrecy, you give everything away at the last moment and fail to surprise your enemy in the end.

iv. Skill and Vigour in Execution — The best laid plans will go amiss unless subordinate commanders have sufficient skill to put them into execution, hence the necessity of training and study. Once your plans are made, carry them out with vigour; half-hearted measures will never succeed; make up your mind what you are going to do and do it. Hesitation and doubt on your part means demoralization on your men's part. A poor plan carried out with vigour stands infinitely more chance of success than a good plan carried out in a half-hearted manner.

v. Co-operation — Co-operation between all arms of the Service and of all individuals is essential to success. All must help each other towards the common goal to defeat the enemy. Good team work is the thing that brings success.

95. Object

The object of Infantry in the Attack is to close with the enemy and destroy or drive him out of his position — decisive

success cannot be obtained until the enemy is captured or destroyed; then, either to defend the ground captured, or to continue to force the enemy back, they must push on with determination; men should never be permitted to entrench until further advance is utterly impossible.

1. To achieve this, Infantry uses the following aids:—
 - i. Cover from view and fire afforded by the ground.
 - ii. Adoption of suitable formations.
 - iii. Covering fire.
2. The Attack is divided into three main phases:—
 - i. Reconnaissance.
 - ii. Penetration.
 - iii. Exploitation.

It is impossible to overwhelm the enemy everywhere. The initial attacks, if successful, will result in a series of penetrations into the enemy defences, of which full advantage should be taken. Reserves of forward units should be used to exploit tactical success and to widen and deepen any penetration that has been effected.

96. Distribution

The Battalions will be divided into two Echelons:—

- i. Forward troops — consisting of those troops it is intended to use in the initial attack.
- ii. Reserves — consisting of the Companies and reserves of fire power.

The principle is that no more troops than are essential to attain their object should be detailed as forward troops.

2. *Method of Attack.*— An attack will usually be carried out by one of the following methods:—

i. The forward troops may be directed against the furthermost objective, reserves following to exploit success or put fresh impetus into the advance. This method is preferable when little is known of the enemy dispositions or when tanks are the main supporting arm.

ii. When extensive fire support is available and the dispositions of the enemy are well known, it may be advisable for leading troops to capture and consolidate some intermediate objective, while others pass through and capture the next one.

3. *Disposition in Depth*.— Disposition in depth is required :—
- i. To enable a commander to take immediate advantage of any success.
 - ii. To facilitate control and prevent premature exhaustion and disorganization of the troops.
 - iii. To protect the flanks and rear of the leading units.
 - iv. To meet counter-attacks.

4. *Frontages*.— The fronts which may be allotted to infantry units cannot be laid down, they depend on :—

- i. The method of attack.
- ii. The nature of the ground.
- iii. The fire support available.
- iv. The morale of the enemy.
- v. Fog and darkness.

The deciding factor is control by commanders. Wide frontages will usually be covered, not by increasing the number of forward units but by increasing the interval between them.

5. *Covering Fire*.— Covering fire is given by the artillery, machine guns, mortars and carrier platoons. Tanks will frequently be employed to work in conjunction with attacking infantry. The object of fire will be to keep the enemy's fire in subjection or to blind it with smoke until rifle companies are within assaulting distance.

6. *Reserves*.— The reserves are the means by which success is exploited or restored. They should consist of a complete tactical unit or units. The uses for which reserves may be employed might be :—

- i. To maintain the momentum of the attack.
- ii. For exploitation.
- iii. To meet a threat against a flank.
- iv. For consolidation.

97. Rifle Company in the Attack

1. *Preliminary Action*.— Having received his orders, the Company Commander will carry out his reconnaissance, prepare his plans and issue his orders which should include :—

- i. Intentions of Battalion Commander.
- ii. Information.

- iii. His objective and how he can best attain it.
- iv. Ground.
- v. Flanks.
- vi. Fire plan.
- vii. Number of Forward Platoons.
- viii. Strength of reserve and employment.
- ix. Equipment.
- x. Transport.
- xi. Position of Company Headquarters.

2. *Distribution*.— A Forward Rifle Company in the attack will be divided into :—

- i. Forward Platoons.
- ii. Company Reserves.

The guiding principle is to employ the smallest number of Forward Platoons consistent with the efficient execution of the task ; the distribution of the Company must be in depth, so as to retain power of manoeuvre.

98. Rifle Platoon in the Attack

Preliminary Action.— Having received his orders, the Platoon Commander will carry out his reconnaissance, prepare his plans and issue his orders, which should include :—

- i. Intention of Company Commander.
- ii. Information.
- iii. His objective and how he can best attain it.
- iv. Ground.
- v. Formations and tasks of Sections.
- vi. Starting line.
- vii. Fire assistance being provided.
- viii. Equipment.
- ix. Walking wounded.
- x. Position and route of Platoon Headquarters.
- xi. Zero hour.

99. Rifle Section in the Attack

1. *Preliminary Action*.— Having received his orders, the Section Commander will carry out his reconnaissance, and then issue his orders, which should include the following :—

- i. Information re the enemy.
- ii. Information re our troops.
- iii. Ground features.
- iv. Platoon objective, route and formation.
- v. Task of Section.
- vi. Route of Section.
- vii. Fire support.
- viii. Acting on reaching objective.
- ix. Equipment.
- x. Wounded.
- xi. Position and route of Platoon Headquarters.
- xii. From where and when the Section will start the attack.

The Section will advance making use of such cover as is available; the formations being varied to suit the different types of ground.

2. Simple points to be borne in mind by Section Commanders:—

- i. Team work.
- ii. Avoid bunching.
- iii. Cross obstacles quickly.
- iv. Steady advance.
- v. Send back information.
- vi. Flanks.
- vii. Use of weapons.

I.S.L. 1938.

I.T. 1937.

CHAPTER XII

DEFENCE

100. Principles

The principles for Defence are the same whatever the size or organization of the force engaged may be. These principles are briefly as follows:—

i. *Fire*.—The fire of all weapons must be organized to stop the enemy, and the plan of defence is made in terms of fire rather than of men. If sufficient time has been gained to enable the positions to be well organized, the enemy will be forced to distribute his fire instead of concentrating it.

ii. *Surprise*.—As important in defence as in attack. The defence depends largely on concealment to effect surprise. Careful consideration should be given to concealment.

iii. *Depth*.—Depth is essential to localize the effect of a successful initial attack. The extent of the distribution in depth will depend on the troops available in comparison with their task, ground, armament, length of time position is to be held, and strength of enemy.

iv. *Control*.—The defenders should be prepared to act quickly as soon as the attacker has disclosed his intentions.

v. *Information*.—Reconnaissance is as important in the defence as the attack. Active patrolling should be carried out.

vi. *Determination*.—All ranks should understand that the troops allotted to the defence of a post or locality are responsible for holding it at all costs, and for inflicting the greatest possible loss upon the enemy.

101. Object

The object of infantry in defence is to defeat the enemy's attack by fire. To enable this to be done with a minimum of loss to itself, infantry is disposed in a number of defended localities which are normally held by platoons. These localities will be capable of all-round defence. The foremost defended localities form the front edge of the defended system and the defences are built up in depth in rear of them. In front of the line of foremost defended localities, a belt of fire of all arms is co-ordinated to break up the enemy's assault. This fire, which

is called "defensive fire" can be brought down at any moment by means of pre-arranged signals.

Behind the foremost defended localities, fire is organized in depth to stop any of the enemy who may succeed in penetrating the forward positions.

The type of defences that can be constructed will depend on the time available for the organization and occupation of the position.

102. Organization of Position

1. The Rifle Companies will be divided into:—

- i. Forward Companies.
- ii. Reserve Companies.

The Forward Companies will be distributed according to the accidents of the ground in such a way that they can best develop the fire of their weapons. This will usually result in the occupation of a chain of localities which mutually support each other by frontal, flanking or enfilade fire, and are covered by the fire of the longer-range weapons echeloned behind them.

2. The Reserve Companies may be allotted one or more of the following three main roles:—

- i. To hold prepared positions to stop the enemy. (Depth)
- ii. Positions from where they can assist by fire.
- iii. To deliver counter-attacks.

3. *Construction of Defences.*—The defender should make full use of natural cover both from fire and from view, and of artificial cover provided by field defences and the use of camouflage.

The programme of development:—

- i. Weapon pits and wire.
- ii. Intermediate weapon pits.
- iii. Joining up weapon pits.
- iv. Deepening all trenches.

4. *Obstacles.*—The fullest use should be made of obstacles, both natural and artificial.

103. Rifle Company in the Defence

Preliminary Action.—The Company Commander having received his orders will arrange for his Company to be moved to a concealed position, where anti-aircraft defence arrangements

should be made, alarm posts selected and observation posts selected. The Company Commander will now carry out his reconnaissance, prepare his plan and issue his orders, which should include:—

- i. The enemy.
- ii. Own troops.
- iii. Flanks.
- iv. Dispositions, localities, boundaries.
- v. Fire plan.
- vi. Reserves.
- vii. Digging, obstacles, tools, etc.
- viii. S.A.A.
- ix. Medical arrangements.
- x. Greatcoats, food and water.
- xi. Intercommunication.

104. Rifle Platoon in the Defence

Preliminary Action.—Having received his orders, the Platoon Commander will send his runner to lead his Platoon to an assembly position under cover adjacent to the locality to be occupied. He will then carry out his reconnaissance, prepare his plans and issue his orders, which should include:—

- i. The enemy—where he is and when and from what direction, attack is expected.
- ii. Own troops—Right and left and in front, if any.
- iii. Fire plan—ground covered by defensive fire, etc.
- iv. Platoon task—position of Sections and Platoon Headquarters.
- v. When fire is to be opened.
- vi. Digging and wiring.
- vii. Patrols.
- viii. Tools.
- ix. Greatcoats, food, fires, etc.

105. Section Commander

The Section Commander having received his orders explains them to the men of his Section. He is responsible for the following:—

- i. Placement of Section weapons.
- ii. Digging.
- iii. Concealment.
- iv. Routine.

I.S.L. 1938.
I.T. 1937.

CHAPTER XII. NOTES.

100. Sample Message.

100. Sample Message. The sample message is given in the form of a letter, and is intended to show the form and content of a message. The message is written in the form of a letter, and is intended to show the form and content of a message. The message is written in the form of a letter, and is intended to show the form and content of a message.

100. Sample Message. The sample message is given in the form of a letter, and is intended to show the form and content of a message. The message is written in the form of a letter, and is intended to show the form and content of a message. The message is written in the form of a letter, and is intended to show the form and content of a message.

100. Sample Message. The sample message is given in the form of a letter, and is intended to show the form and content of a message. The message is written in the form of a letter, and is intended to show the form and content of a message. The message is written in the form of a letter, and is intended to show the form and content of a message.

CHAPTER XIII

MESSAGES, REPORTS AND ORDERS

106. Sample Message

All ranks should be taught how to write a simple message, how to send a verbal message, and how to make a verbal report; such messages and reports must be clear and accurate if they are to be of any value. Messages may be written on any paper if the message form (A.F.C. 2128) is not available.

The following message is clear, accurate and observes all the rules that should be adhered to in message writing:—

To 2 Pl. (Note [a])

From 5 Sec. (Note [a])

No. 5 (Note [b])

10 May. (Note [c])

Have passed through RIDGE COPSE No enemy in sight

1000 hours (Note [d])

A. Law, (Note [e])
L/Cpl.

- (a) The message should be addressed to the UNIT, and not to anyone by name. Similarly the UNIT (in this case No. 5 Section) is written after the word "FROM."
- (b) Each message sent should be given a number.
- (c) Day of month only need be filled in.
- (d) Time should be added or the message loses much of its value.
- (e) Message signed by sender with name and rank only.

107. Instructions for Compiling Messages

1. The *Body* of the message should be brief and accurate. The writing must be large and clear so that it can be easily read even in bad light.

2. *Places*.—Block capitals will be used for all place names. If maps are available, map references should be given. When describing a position, the four cardinal points of the compass will be written in full, *e.g.*:

SOUTH of ALDERSHOT not S of ALDERSHOT.

Intermediate points may be abbreviated, *e.g.*:

S.W. of ALDERSHOT not SOUTH WEST of ALDERSHOT

When indicating a position with reference to a letter which appears in a place name on the map, the following method will be used.

S.W. of S in ALDERSHOT not S.W. of S of ALDERSHOT

Where there are two similar letters in the name, the letter to which reference is made should be underlined, *e.g.*:

SOUTH of the first A in CAESARS CAMP.

Personal names, regimental names and the word NOT will also be written in block capitals.

3. *Times*.—The 24 hr. clock system will be used when describing times, *e.g.*

0900 hrs. 9 a.m.
1200 hrs. noon
2130 hrs. 9.30 p.m.
24 hrs. midnight

108. Verbal Messages

Never send a Verbal Message except when it is impossible to send a written one. In this case, the form should be the same as for a written message, *i.e.*—

To

From

The message

The time

Verbal messages should always be short; to take them, always select the most intelligent man available; the latter should be made to repeat the message twice to ensure that he has memorized it.

VERBAL REPORTS

Verbal Reports should be short and clear. Think out beforehand what must be reported. Making notes ensures that important points will not be overlooked.

If the ground is in view, an Officer or N.C.O. making a report should point out the details on the ground; if not, and a map is available, they should use the map to clarify their reports.

VERBAL ORDERS

Verbal Orders should be given out in the logical sequence outlined below; this sequence, if always adhered to, helps the person giving the order to ensure that nothing is omitted; at the same time the recipient, being used to this sequence, can grasp the details with the minimum of delay:—

1. *Information.*—

i. Regarding the enemy.—Only give information likely to help recipients to carry out their tasks.

ii. Regarding our own troops.—As for (i). In addition, necessary information as to what other troops are doing should be put in this para.

2. *Intention.*—State clearly and briefly *what you* intend to do with the troops under *your* command, but do *not* give details of *how you* intend doing it.

3. *Method.*—Describe clearly how you are going to carry out your intention. The following points would usually be included in this para,—for the attack of an infantry section.

In Attack.—Route, formation, first bound, scouts, objective, action on capture of objective, etc.

In Defence.—Task of section, arrangements for fire, sentries, A.A. and anti-gas measures; allocation of digging tasks, etc.

4. *Administrative Arrangements.*—Any alteration in the normal equipment of the section should be indicated here, also location of platoon truck, supply of ammunition, and medical arrangements.

5. *Intercommunication.*—

Position of Platoon Headquarters.

Light signals.

Orders to man selected as a runner.

CHAPTER XIV

APPRECIATIONS

109. Definition

An appreciation is a military review of the situation, based on all available information, culminating in a statement of the measures recommended to meet it.

Appreciation of strategical or tactical problems in the field may have to be made very rapidly; for this reason, all officers should have constant practice in making appreciations, as such a habit will teach them to arrange their facts methodically, and will train them to arrive rapidly at logical and sound conclusions.

110. Sequence

Whether appreciations are written or delivered verbally, it is advantageous to follow a logical sequence of ideas, as this enables the argument to be formulated and grasped more rapidly.

The accepted sequence is:—

1. *The object.*

State it briefly, and do not confuse it with the "Objective."

2. *Considerations which affect the attainment of the object.*

Important considerations would be the strength of the forces opposed to each other, time and space, ground and possibly many others; but, do not include any which have not a definite bearing on the operation.

3. *Courses open to the two sides.*

Deal with those open to your own side first, except in defence.

Do not include those which are obviously unsound, either for yourself or enemy.

Give pros and cons for each course and decide from these which you will take and which the enemy is most likely to take.

4. *The plan.*

Aim at a simple and practical plan. State it clearly and concisely, but put in all the details essential for orders to be drafted from it. Vide Trg. Regulations, 1934, Sec. 22.

Below is given the Headings, etc., for a sample "Attack Appreciation" which may serve to clarify the above:—

111. Headings, etc., for Sample Appreciation

APPRECIATION BY LIEUT.-COL. X, THE R.C.R.
AT L AT 0850 HRS., 25TH AUGUST, 1935

Object.—

1. Make a brief statement of your OBJECT.

NOTE:—Always keep the object firmly before you.
Do not confuse OBJECT with OBJECTIVE.

Considerations.—

2. Position and relative strengths.
 - (a) Enemy.
 - (b) Own forces.
3. Topography and vulnerable points.
 - (a) Considerations regarding the enemy's position.
 - (b) Consider topography from the attacker's point of view.
4. Time and Space.
Consider how time and space influence the situation.

Courses.—

5. (a) Consider the advantage and disadvantage of different lines of attack to the right, centre and left.
- (b) Make a decision.
6. Consider possible dispositions of enemy and what one may encounter.

Plan.—

7. Here give a brief outline of plan to include:
 - (a) Dispositions;
 - (b) Objective;
 - (c) Assembly area;
 - (d) Starting line; etc., etc.
8. Fire Plan.
 - (a) Artillery;
 - (b) M.Gs.;
 - (c) Mortars.
9. Zero hour.
10. Location of H.Q.

CHAPTER XV

THE NEW DRILL

112. Squad Drill

1. *Three ranks.*—Squad drill is carried out in three ranks unless numbers are insufficient when two ranks will be formed.

2. *Distance and Interval.*—Distance between ranks will be 30 inches; intervals between men will be obtained by dressing with intervals.

3. *Dressing.*—Dressing will be carried out as in the Manual of Elementary Drill, 1935, Sec. 8, except that the hand will be clenched with the knuckles touching the shoulder of the man on the right (or left).

When dressing with the rifle at the order, the left arm will be extended.

4. *Taking open and close order.*—On the command "Open—order—March," the front rank will take two paces forward, and the rear rank two paces back. On the command "Close—order—March," the action of the front and rear ranks is reversed.

When dressing is carried out by word of command (as in Ceremonial), the whole squad, etc., will be dressed on completion of opening order.

5. *Elementary instruction.*—Elementary instruction in squad drill will be carried out in open order; opening and closing ranks is abolished.

When saluting instruction is carried out, the squad will be turned to a flank.

6. *Guides and blank files.*—When squads, etc., are turned about, guides and blank files will take three paces forward at the halt, or mark time three paces if on the move.

During squad drill in open order, blank files and guides will not alter their positions unless ranks are changed.

7. *Files.*—The meaning of file in three ranks is the same as for two ranks, except that the blank file will be the second and not the third file from the left. If there are only two men in a file, the centre rank will be left blank.

8. *Marching in line and changing direction.*—When squads, etc., change direction, the pivot man will take three paces forward instead of two. The second and third ranks will adhere to the drill at present laid down for the rear rank.

9. *A squad, etc., changing direction by wheeling.*—Squads or Platoons in Line may change direction by wheeling instead of forming. The action of each rank will be similar to that laid down for a section of fours (Manual of Elementary Drill, 1935, Sec. 39).

10. *Marching in slow time.*—This will be taught.

113. Arms Drill

1. *Fixing and unfixing bayonets.*—The following procedure will be adopted:—

i. **"The squad will fix bayonets"**—"Fix bayonets."

On the command "Fix," push the rifle forward with the right hand as in the position of "Stand at Ease" with the rifle; at the same time seizing the handle of the bayonet with the left hand, back of the hand to the front and thumb and fingers to the rear, withdraw the bayonet sufficiently to allow the left arm to become straight. On the command "Bayonets," draw the bayonet, turning the point upwards and keeping the elbow down; place the handle on the bayonet standard with the ring over the stud on the nose cap, pressing it home to the catch: at the same time turn the head and eyes down to the right to ensure the bayonet is properly fixed, the head and eyes remaining in this position on completion. On the command "Attention," the position of attention will be resumed.

ii. **"The squad will unfix bayonets"**—"Unfix bayonets."

On the command "Unfix," keeping the heels closed, place the rifle between and grip it with the knees, guard to the front. At the same time seize the rifle with the left hand, knuckles to the front, thumb on the bayonet bolt spring pressing the spring with the left thumb, and with the right hand seize the bayonet handle. Disengage the bayonet clear of the rifle. On the command "Bayonets," drop the point of the bayonet to the left side, ring to the rear, at the same time seizing the scabbard with the left hand, thumb underneath the frog and turning the head and eyes towards the top of the scabbard, force the bayonet home. On the command "Attention," seize the rifle with the right hand at the band, raise the head and eyes, and resume the position of attention.

Note.—Cautionary words of command will not be used.

2. *Piling and unpiling arms.*—The procedure will be the same as that laid down in Manual of Elementary Drill, 1935, Sec. 67, except for the following:—

i. *Piling arms.*—The second and third ranks will stand fast

(except the third rank when it moves forward to place its rifles against the piles already in position). On the command "Stand clear" all ranks will take a pace to the rear and turn to the right flank of the squad. On again falling in the men will place themselves as they stood before falling out.

ii. *Unpiling arms.*—In the last motion when the front rank turns about, the second and third ranks will stand fast.

PLATOON, COMPANY AND BATTALION DRILL

The following paragraphs give the detail of platoon, company and battalion drill. The same drill will be carried out both on training and ceremonial. The formations described below are shown on Plates at the end of this Chapter.

Ranks will be dressed by word of command on completion of each movement except on field training. The platoon guide will normally be No. 1 section commander. On ceremonial or instructional parades special guides will be detailed.

114. Platoon Drill

1. *A Platoon in line forming column of route.*
"Move to the right (or left) in column of route."
"Right (or Left) Turn—Quick March."

The platoon commander and the platoon serjeant will move to their positions on the command "Right turn."

2. *A Platoon in column of route forming line.*
"Platoon will advance—Left turn."

The men act as in squad drill, the platoon commander and platoon serjeant regaining their positions in line in Quick Time.

3. *Other Movements.*—For drill purposes. Platoons will be exercised in the movement detailed for squad drill, the word "Platoon" being substituted for "Squad."

115. Company Drill

1. *A close column when halted forming column of route.*
 i. **"Advance (or retire) in column of route from the right (or left)—Right (or left) turn."**

The commander of the leading (or rear) platoon will give "*No. platoon left (or right) wheel. Quick.—March,*" and each platoon commander will act similarly in time to gain his place in column of route.

ii. **"Move to the right (or left) in column of route—Right (or Left) turn."**

The commander of the leading (or rear) platoon will give "No. platoon. *Quick—March*," and each remaining platoon commander will give "No. platoon, *left (or right) wheel, Quick—March*" in time to gain his place in column of threes.

(a) Unless otherwise ordered, a company will move off from the right of the leading platoon, or from the left of the rear platoon.

(b) A company can be marched off from any platoon as follows:—"Advance (or retire) in column of route in the following order.—No. 2, No. 3, No. 1 platoons."

2. A close column when halted moving to a flank in threes.

"Move to the right (or left) in threes. Right (or left) turn—*Quick—March*."

The platoon on the right (or left) will direct unless any other platoon is detailed to do so.

3. A column of route forming close column of platoons at the halt facing a flank.

"At the halt, facing left, form close column of platoons."

The commander of the leading platoon will halt his unit and turn it to the left by giving "No. platoon. *Halt, Left turn*." The remainder will be led by their guides by the shortest route to their positions in close column, where they will receive the command "No. platoon. *Halt. Left turn*." On the word "halt," the right guides will at once turn to their left and take up their covering and distance from the right guide of the platoon in front.

4. A company in close column advancing (or retiring) in column.

i. "Advance in column."

The commander of the leading platoon will give "No. platoon will advance. *By the right. Quick—March*," and the remaining platoon will be similarly marched off when the platoon next in front has reached column distance.

ii. "Retire in column." "The company will retire. *About—turn*."

Platoon commanders will march their platoons in succession at column distance giving the command "No. platoon. *By the left. Quick—March*."

5. A company in column changing direction.

"Change direction—*Right*."

The commander of the leading platoon will give the command "No. Platoon. *Right—Form*," and when the platoon is formed in the new direction, "Forward." The remaining platoons on arriving at the same point, will be formed successively in a similar manner.

i. Before changing direction left, a column should normally be ordered to march "By the left."

ii. A column can similarly change direction half (quarter or three-quarters) right.

iii. Platoons may change direction by wheeling, in which case for "Right—Form" substitute "Right—Wheel." The command "Forward" being deleted. This method is normally used on ceremonial parades.

6. A line when halted forming column facing a flank at the halt.

"At the halt. Into column. Platoons *Right—Form. Quick—March*."

The men will act as in squad drill.

The right guide of each platoon acting as the pivot man of the squad.

116. Battalion Drill

1. A battalion may be paraded in any of the following formations—in *Line, Close Column, Column or Mass*. Details of the normal positions, intervals and distances for some formations are given in the Plates at the end of this Chapter. These details may be modified as may be dictated by the ground or other circumstances. In war, if there is a possibility of air reconnaissance or attack, companies should be suitably disposed to make use of available cover.

2. When parading for field training, a battalion will normally form up in *mass*.

The movements from and into *Line, Column and Close Column*, will normally be only carried out on ceremonial parades.

Note.—When parading in close column of companies prior to marching past by platoons, the distance between companies must exceed the frontage of a platoon, so that platoons have room to form to the right.

3. *Movements from and into mass*.

i. A mass moving off in column of route—

"Advance (or retire) in column of route from the right (or left) in the following order"

The battalion commander will then give the order of march. The company commander of the leading company in the order of march will then give "*No. company. Advance (or retire) in column of route from the right (or left). Right (or left) turn.*"

The commander of the leading (or rear) platoon will then give "*No. platoon. Left (or right) Wheel. Quick—March*" and then the remaining platoons of the company will be marched off by their commanders in succession in the same way. The remaining companies will successively be marched off in the same way in time to follow the preceding company.

ii. A column of route forming mass facing a flank—
"At the halt, facing left, form—mass."

The commander of the leading company will at once give the caution "*No. company. At the halt. Facing left. Form close column of Platoons.*" The company will then act as in company drill.

As the leading platoon of each succeeding company arrives at the correct interval from the preceding company, the company and platoon commanders will act in a similar manner.

4. *Movements from and into Line, Column and Close Column.*

i. A line when halted forming close column facing the same direction—

"On the right form close column. Remainder right turn—Quick—March."

The company on the right will stand fast. The remainder will be led by their guides by the shortest route to their position in close column, on arrival at which their commanders will give the command "*No. company. Halt. Left—turn.*" On the command "*Halt,*" the right guides will at once turn to their left and take up the covering and distance from the right guides of the company in front, each company dressing by the right as soon as it has turned to the left.

ii. A close column, when halted, moving to the flank in column of threes—

"Move to the right in column of threes. Number one company leading."

The commander of No. 1 company will give the command "*No. 1 company. Right turn. Quick—March*"; each succeeding company commander will act similarly in time to gain his place in column of threes.

iii. A column of threes forming close column at the halt facing a flank—

"At the halt. Facing Left. Form Close Column."

The commander of the leading company will give the command "*No. company. Halt. Left—Turn.*" The remainder will be led by their guides by the shortest route to their positions in close column, on arrival at which their commanders will give them the same command. On the command "*Halt,*" the right guides will at once turn to their left and take up the covering and distance from the right guide of the company in front.

iv. A column on the march closing to close column at the halt—

"At the halt. Form Close—Column."

On this command the commander of the leading company will give the command "*No. 1 company. Halt.*" The remaining companies will be successively halted on reaching their positions in close column.

v. A close column moving to a flank in threes forming line at the halt—

"At the halt. Facing right. Form—Line."

The commander of the right company will give the command "*No. company. Halt. Right—Turn.*" The remaining companies will be led by their guides by the shortest route into their positions in Line and will be turned to the right by their commanders.

vi. Close column moving to a flank in threes changing direction—

"Change direct left."

The commander of the company on the left will give "*No. company. Left wheel,*" and when the rear of his company has wheeled, "*Mark time.*" The remaining companies will continue to march in the old direction until they have reached a point where on wheeling square to the left they will be able to march straight to their position in close column facing the new direction. Company commanders will give "*No. company. Left wheel,*" on reaching their points and "*Mark time*" when they have reached their position in close column. The battalion commander will give

"Forward" or **"Halt"** when all companies are marking time.

vii. A column on the march changing direction—

"Change direction—Right."

The commander of the leading company will give the command "*No..... company. Right—form,*" and, when the company is formed in the new direction, "Forward". The remaining companies, on arrival at the same point, will be formed successively in a similar manner. If changing direction "left," a column should first be ordered to march by the left.





















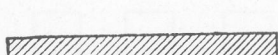

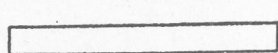
117. Field Drill

Field drill as laid down in Military Training Pamphlet No. 1 is cancelled except for deployment. On training, when the order "Quick—March" is given, the soldier will come to attention and move off at the sling (right shoulder).

Attention is directed to March Discipline, Manual of Elementary Drill, 1935, Chapter VIII.

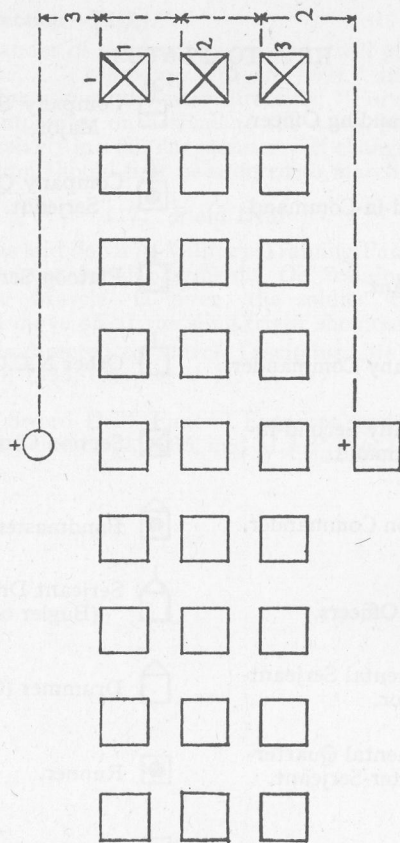
Note.—For Sword Drill, Funeral Exercises, and Ceremonial, see Manual of Ceremonial, 1935, and M.T.P. No. 18.

KEY TO PLATES

	Commanding Officer.		Company Sergeant-Major.
	Second-in-Command.		Company Qr.-Mr.-Serjeant.
	Adjutant.		Platoon Serjeant.
	Company Commander.		Other N.C.Os.
	Company Second-in-Command.		Section Commander.
	Platoon Commander.		Bandmaster.
	Other Officers.		Serjeant Drummer (Bugler or Piper).
	Regimental Serjeant-Major.		Drummer (Orderly).
	Regimental Quarter-master-Serjeant.		Runner.
			Other ranks.
	or		Front rank.
	or		Rear rank.

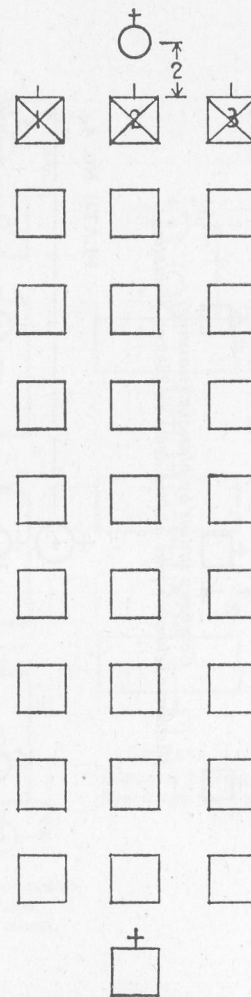
The figures indicating intervals and distances represent paces.

PLATE No. 1.



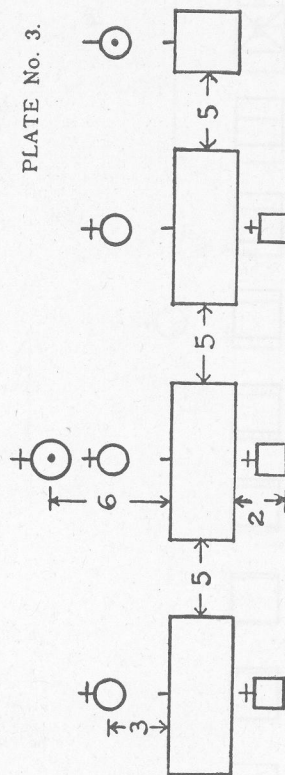
*Platoon in line in three ranks.
Blank files will be in the second file from the left. Ranks will be at arms interval (handclosed).*

PLATE No. 2.



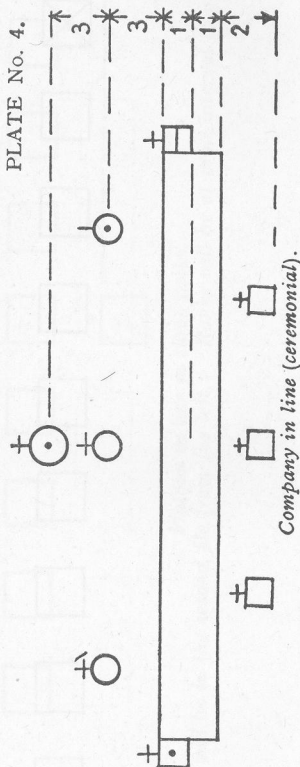
Platoon in column of route (threes).

PLATE No. 3.



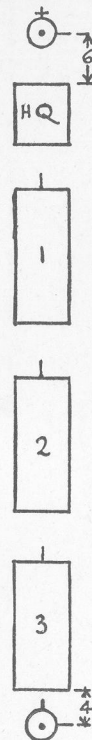
*Company in line by platoons (training).
Distances between ranks as laid down in platoon formations.*

PLATE No. 4.



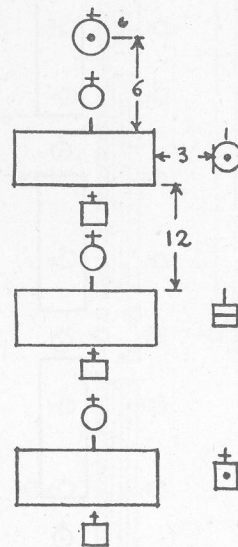
Company in line (ceremonial).

PLATE No. 5.



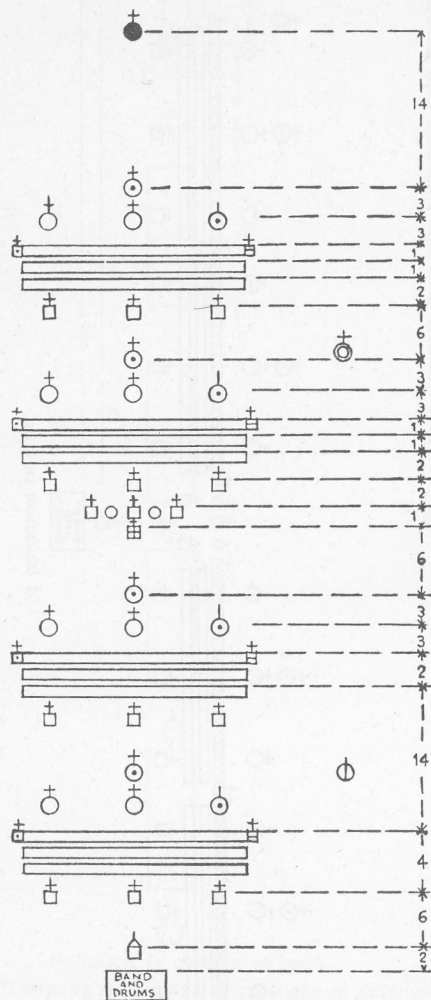
*Company in column of route.
Transport in position
according to orders issued.*

PLATE No. 6.



*Company in close column (ceremonial).
Distances between ranks, etc., as for platoon
formations. For field training coy. H.Q. will
fall in as required.*

PLATE No. 9.

*A battalion in close column.*

$\frac{1}{100}$